

**Prepublication Copy of the Standard Tables
and Technical Notes for
*Summary Report 1998: Doctorate Recipients
from United States Universities***

**The Seven Basic Tables, 1998 (Appendix A)
The Trend Tables, 1988-1998 (Appendix B)
Technical Notes (Appendix C)**

Survey of Earned Doctorates

November 1999

Please reference these data as:

**NSF/NIH/NEH/USED/USDA, Survey of Earned Doctorates,
Prepublication Tables for the *Summary Report 1998, Doctorate
Recipients from United States Universities*, November 1999.**

PROJECT DESCRIPTION

The Survey of Earned Doctorates (SED), an annual census of new recipients of research doctorates from U.S. institutions, provides baseline data on the U.S. population of research doctorates. For each respondent, the survey collects demographic information, an educational history, data on financial support during graduate school, and information about postgraduation plans. Government agencies, academic institutions and industry rely on SED data to address policy, education, and human resource issues.

Five federal agencies sponsor the survey: the National Science Foundation, the National Institutes of Health, the National Endowment for the Humanities, the U.S. Department of Education, and the U.S. Department of Agriculture. Until 1997, the National Research Council of the National Academy of Sciences administered the SED for the federal sponsors. Beginning with the 1996-97 academic year, the National Opinion Research Center (NORC) at the University of Chicago assumed responsibility for conducting the survey. In cooperation with graduate deans of the 399 research doctorate-granting institutions, NORC collected SED data for 42,683 doctorate recipients in the 1997-98 academic year (a period hereafter referred to as AY 1998). The percentage of self-reported questionnaires was 91.5 percent.

Each year, data gathered from the SED are added to the Doctorate Records File (DRF), a virtually complete database of doctorate recipients from 1920 to the present. SED questionnaire data supply DRF records from 1958 to the present. Prior to 1958, DRF data were gathered from commencement programs from doctorate-granting institutions. The DRF, which currently holds 1,313,733 records, is regarded as the main source of information on doctoral recipients at the national level. The DRF serves as the sampling frame for the biennial Survey of Doctorate Recipients, a longitudinal survey describing career paths of doctorate recipients in science and engineering.

***** IMPORTANT NOTICE *****

The estimates reported for the Survey of Earned Doctorates (SED) are simple tabulations of all available information with no adjustment for nonresponse. Therefore, differences in response rates from year to year can produce numerical fluctuations that are unrelated to real trends.

Although response to the SED has been as high as 95 to 98 percent over time, it declined to 92 percent during the 1980s. In an effort to improve the response rate, the survey methodology was modified in the years after 1989. Response rose, stabilizing around 95 percent for 1991 to 1995. However, the response rates for 1996 and 1997 were 92.8 percent and 91.5 percent, respectively. This year, the response rate again was 91.5 percent. (Note: These percentages represent *self-report rates*, that is, the proportion of questionnaires completed by doctorate recipients. While survey forms containing partial information filled in by either the doctoral institution or staff of the National Opinion Research Center are not included in these rates, tables in this report incorporate the available data from these forms.) The self-report rate for 1998 may increase slightly in the next year if additional questionnaires are received from doctorate recipients. See Appendix C for a table giving survey response rates from 1967 to 1998.

Item response rates have shown a pattern of improvement since 1990—a natural consequence of the increase in the overall self-report rate, as well as a result of format revisions to the questionnaire and follow-ups for missing information. In 1990, new follow-up procedures were implemented to increase coverage of several variables: birth year, sex, race/ethnicity, citizenship status, country of citizenship, baccalaureate year and institution, and postgraduation plans. Response rates for these variables have since improved—especially for citizenship and race/ethnicity, resulting in an increase in the reported numbers of minority Ph.D.s. (However, for 1997 and 1998 the citizenship response rate of 92 percent is lower than it was in 1990-1996.) Whether or not individuals completed the survey questionnaire, the following four data items are available for most all recipients: sex, Ph.D. institution, Ph.D. field, and Ph.D. year.

The data for a given year are updated the following year with any responses received *after* survey closure. Post-survey adjustment was most significant for 1990 and 1991 Ph.D.s, with the largest impact on the number of blacks. For both of these years the total number of black Ph.D.s increased by about 7.5 percent in the year after survey closure. The survey cycle was then extended to allow receipt of more follow-up information before closure, resulting in much smaller post-survey adjustments for 1992, 1993, 1994, and 1995 data (a 1.4 percent increase in black Ph.D.s for 1992, a 0.2 percent increase for 1993, a 0.5 percent increase for 1994, and a 1.5 percent increase for 1995).

Adjustments to data are presented in reports subsequent to the initial report for a survey. For example, updates for 1994 appeared in *Summary Report 1995*. Updates to 1998 data will be presented in next year's report.

APPENDIX A: The Seven Basic Tables, 1998

Appendix A includes the following seven tables:

- A-1 Number of Doctorate Recipients, by Gender and Subfield, 1998
- A-2 Number of Doctorate Recipients, by Citizenship, Race/Ethnicity, and Subfield, 1998
- A-3 Statistical Profile of Doctorate Recipients, by Major Field, 1998
- A-4 Statistical Profile of Doctorate Recipients, by Race/Ethnicity and Citizenship, 1998
- A-5 Sources of Graduate School Support for Doctorate Recipients, by Broad Field and Gender, 1998
- A-6 State of Doctoral Institution of Doctorate Recipients, by Broad Field and Gender, 1998
- A-7 Institutions Granting Doctorates, by Major Field, 1998

TABLE A-1 and TABLE A-2: Tables A-1 and A-2 display data for the most recent year by subfield of doctorate. Field groupings may differ from those in reports published by federal sponsors of the Survey of Earned Doctorates (SED). The "general" field categories—e.g., "chemistry, general"—include individuals who either received the doctorate in the general subject area or did not indicate a particular specialty field. The "other" field categories—e.g., "chemistry, other"—include individuals whose specified doctoral discipline was not among the specialty fields listed.

Table A-1 presents data by doctoral specialty and gender. Table A-2 displays doctoral specialty by citizenship and race/ethnicity. For a detailed description of the racial/ethnic variable, see the explanatory note for Table A-4.

TABLE A-3: Table A-3 is composed of three 2-page tables. The first table includes data on *all* research doctorate recipients from the most recent year; the other two tables present the same data by gender. Field groupings may differ from those in reports published by federal sponsors of the SED. Terms requiring definition are as follows:

Percentage with Master's: The percentage of doctorate recipients in a field who received a master's degree in any field before earning the doctorate.

Median Age at Doctorate: One-half received the doctorate at or before this age. A recipient's age is obtained by subtracting the month/year of birth from the month/year of doctorate. (See note on next page.)

Median Time Lapse: "Total Time" refers to the total calendar time elapsed between the month/year of baccalaureate and the month/year of doctorate. "Registered Time" refers to the actual time in attendance at colleges and universities between receipt of the baccalaureate and the doctorate. Enrollment includes years of attendance not related to a recipient's doctoral program.

NOTE about medians: *The method of computing medians has been revised. Beginning with Summary Report 1994, months (of birth, baccalaureate, and doctorate) are included in the calculations; medians presented in earlier reports were based only on years. Some medians would be the same regardless of the method of computation, but the new method generally computes slightly different results than are obtained by the old method. While variation is small (usually one or two decimal places), the reader should consider these differences when comparing medians presented in this report with those in earlier reports.*

Postgraduation Plans: Each year's doctorate recipients provide information on post-graduation employment or study plans in response to items B1 through B9 on the survey form. Since the questionnaire is filled out around the time the doctorate is awarded, a recipient's plans are subject to change. However, comparisons with the Longitudinal Survey of Doctorate Recipients (SDR) have shown SED data to be a reasonable indicator of actual employment status in the year following the doctorate, although results vary by sector. (The SDR is a follow-up employment survey of a sample of doctorate recipients in science, engineering, and, until 1995, humanities fields.)

In Table A-3 the postgraduation plans of doctorate recipients are grouped as follows: "Postdoctoral Study Plans" (fellowship, research associateship, traineeship, other), "Planned Employment after Doctorate" (educational institution, industry, etc.), and "Postdoctoral Plans Unknown." These categories include recipients who were still negotiating or seeking positions at the time of survey completion, as well as those whose plans were definite. The sum of these lines equals 100 percent for each column, with allowance for rounding: for example, 28.0 percent of all

psychology doctorate recipients had postdoctoral study plans, 54.2 percent planned to be employed, and 17.8 percent did not report their post-graduation plans, totaling 100 percent. The study rows is further subdivided by type of study or appointment (fellowships, research associateships, traineeships, and other study). The percentages in these subdivisions sum to the percent of respondents in the given column who reported plans for postdoctoral study. The employment row is similarly subdivided by type of employer. The percentages for these rows add to percentage of respondents in the given column who planned employment. The category for educational institutions includes elementary and secondary schools as well as colleges and universities, and the category for government includes military service.

The four lines of data beginning with "Definite Postdoctoral Study" distinguish between individuals who had definite postgraduation plans at the time of survey completion (item B1: "Am returning to, or continuing in, predoctoral employment" or "Have signed contract or made definite commitment") and those who were still seeking employment or postdoctoral study (item B1: "Am negotiating with one or more specific organizations," "Am seeking position but have no specific prospects," or "Other"). These four lines, when added to the prior line, "Postdoctoral Plans Unknown," total 100 percent with allowance for rounding. The two lines "Definite Postdoctoral Study" and "Seeking Postdoctoral Study" add to give the percentage for "Postdoctoral Study Plans"; the two lines "Definite Employment" and "Seeking Employment" add to give the percentage for "Planned Employment After Doctorate."

Percentages showing the distribution of doctorate recipients by postdoctoral work activity and region of employment are based only on the number of recipients who had *definite employment* commitments at the time they completed the questionnaire. These percentages exclude recipients who planned postdoctoral study (as described above) and recipients who were still *seeking* employment at the time they completed the questionnaire. (Note that the rows on specific postdoctoral study and employment plans discussed earlier include individuals whose plans were *not definite*.) Revisions to the questionnaire format beginning in 1990 resulted in higher rates of nonresponse to the item on work activity through 1993, when the rate was 15.1 percent. The questionnaire was revised again in 1994, and nonresponse subsequently dropped to 11.9 percent in 1994 and 10.7 in 1995. A final revision in 1995 dropped the nonresponse for this item to just 3.4 percent in 1997.

The U.S. regions of employment shown in Table A-3 include the following states and territories:

<i>New England:</i>	Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, Vermont
<i>Middle Atlantic:</i>	New Jersey, New York, Pennsylvania
<i>East North Central:</i>	Illinois, Indiana, Michigan, Ohio, Wisconsin
<i>West North Central:</i>	Iowa, Kansas, Minnesota, Missouri, Nebraska, North Dakota, South Dakota
<i>South Atlantic:</i>	Delaware, District of Columbia, Florida, Georgia, Maryland, North Carolina, South Carolina, Virginia, West Virginia
<i>East South Central:</i>	Alabama, Kentucky, Mississippi, Tennessee
<i>West South Central:</i>	Arkansas, Louisiana, Oklahoma, Texas
<i>Mountain:</i>	Arizona, Colorado, Idaho, Montana, Nevada, New Mexico, Utah, Wyoming
<i>Pacific & Insular:</i>	Alaska, California, Hawaii, Oregon, Washington, American Samoa, Guam, Puerto Rico, Trust Territory, Virgin Islands

TABLE A-4: Table A-4 contains data by race/ethnicity and citizenship for selected variables included in Tables A-3 and A-5. Field groupings may differ from those in reports published by federal sponsors of the SED.

The racial/ethnic question has undergone several revisions over the years. In 1977 it was modified to correspond to a standard question format recommended by the Federal Interagency Committee on Education and adopted by the Office of Management and Budget (OMB) for use in federally sponsored surveys; an explanation of the effect of these changes is detailed on page 13 of *Summary Report 1977*. (Note: Changes in the OMB guidelines prompted the moving of persons having origins in the Indian subcontinent from the white category to the Asian category.) In 1980 the item was further revised in two ways: (1) the Hispanic category was subdivided into Puerto Rican, Mexican American, and other Hispanic to provide more detail for users of the racial/ethnic data, and (2) respondents were asked to check only one racial category. (Before 1980 doctorate recipients could check more than one

category to indicate their race.) The item was modified again in 1982 to separate the questions on race and ethnicity. Since then respondents have been asked to first check one of the four racial group categories (American Indian, Asian, black, or white) and then indicate whether or not they are Hispanic. In Table A-4, Doctorate recipients who reported Hispanic heritage, regardless of racial designation, are included in one of three Hispanic groups: Puerto Rican, Mexican American, or other Hispanic. The remaining survey respondents are then counted in the respective racial groups. (Note: Doctorate recipients who checked the category "American Indian or Alaskan Native" are identified as American Indian in this report.)

NOTE about median age and time lapse (to doctorate): *The method of computing medians has been revised. Beginning with Summary Report 1994, months (of birth, baccalaureate, and doctorate) are included in the calculations; medians presented in earlier reports were based only on years. Some medians would be the same regardless of the method of computation, but the new method generally computes slightly different results. While variation is small (usually one or two decimal places), the reader should consider these differences when comparing medians presented in this report with those in earlier reports. See explanatory information on Table A-3 for further description.*

In the section of "Doctoral Program Support" a recipient counts in more than one category if support was received from multiple sources. Because a student counts more than once for sources of support, the vertical percentages sum to more than 100 percent. See the explanatory note on Appendix Table A-5 for further detail. (Data on the primary source of support for doctorate recipients are presented in the body of the report.)

The other sections in Table A-4 correspond to many of those in Appendix Table A-3. The reader is referred to the explanatory note on Table A-3 for additional information.

TABLE A-5: Table A-5 displays data reported in item A11 on financial resources used in support of the respondent's doctoral program, by broad field and gender of recipient. Field groupings may differ from those in reports published by federal sponsors of the SED.

A recipient counts in more than one category in Table A-5 if more than one financial resource was reported. Because a student counts once for each of his/her financial resources, the vertical percentages sum to more than 100 percent. (Data on the primary financial resources for doctorate recipients are presented in the body of the report.) Please consult Appendix C: Technical Notes for additional information on changes in the coding of Sources of Support/Financial Resources..

TABLE A-6: Table A-6 shows, by broad field and gender, the number of persons receiving a doctorate in the most recent year from institutions in each of the 50 states, the District of Columbia, and Puerto Rico. Field groupings may differ from those in reports published by federal sponsors of the SED. See inside the back cover of the Summary Report for a description of field groupings as reported in this table; see the questionnaire's Specialties List at the back of the report for the names and codes of the subfields included.

TABLE A-7: Table A-7 displays data by doctorate-granting institution and major field. It includes all institutions in the United States (the 50 states, the District of Columbia, and Puerto Rico) that awarded doctoral degrees in the most recent year. Field groupings may differ from those in reports published by federal sponsors of the SED and from departmental designations at institutions.

APPENDIX TABLE A-1 Number of Doctorate Recipients, by Gender and Subfield, 1998

Subfield of Doctorate	Number of Doctorates			Subfield of Doctorate	Number of Doctorates		
	Total	Men	Women		Total	Men	Women
TOTAL ALL FIELDS*	42,683	24,653	17,856	Engineering Science	50	42	8
PHYSICAL SCIENCES	6,739	5,104	1,600	Environmental Health Engineering	63	46	17
MATHEMATICS	1,177	872	297	Industrial/Manufacturing	227	187	39
Applied Mathematics	265	203	61	Materials Science	482	404	75
Algebra	75	57	18	Mechanical	936	849	79
Analysis & Functional Analysis	130	105	25	Metallurgical	59	51	7
Geometry	54	39	15	Mining & Mineral	21	17	4
Logic	16	11	5	Nuclear	97	86	10
Number Theory	46	39	7	Ocean	29	29	0
Mathematical Statistics	204	141	62	Operations Research	62	47	15
Topology	65	52	13	Petroleum	48	42	6
Computing Theory & Practice	18	15	3	Polymer/Plastics	59	44	15
Operations Research	17	11	6	Systems	68	59	9
Mathematics, General	163	118	39	Engineering, General	30	23	3
Mathematics, Other	124	81	43	Engineering, Other	194	156	38
COMPUTER SCIENCE	923	763	157	LIFE SCIENCES	8,540	4,640	3,876
Computer Science	817	696	118	BIOLOGICAL SCIENCES	5,848	3,298	2,533
Information Sciences & Systems	106	67	39	Biochemistry	798	448	349
PHYSICS & ASTRONOMY	1,584	1,354	223	Biomedical Sciences	184	101	79
Astronomy	91	69	22	Biophysics	166	119	47
Astrophysics	117	93	24	Biotechnology Research	12	8	4
Acoustics	18	12	6	Bacteriology	13	9	4
Chemical & Atomic/Molecular	99	86	13	Plant Genetics	40	22	18
Elementary Particles	173	162	11	Plant Pathology	18	10	8
Fluids	26	26	0	Plant Physiology	61	33	28
Nuclear	92	81	11	Botany, Other	113	58	55
Optics	104	86	18	Anatomy	35	27	8
Plasma & High-Temperature	55	53	2	Biometrics and Biostatistics	75	35	39
Polymer	24	20	4	Cell Biology	299	145	154
Solid State & Low-Temperature	313	276	37	Ecology	292	177	114
Physics, General	190	158	29	Developmental Biology/Embryology	127	66	61
Physics, Other	282	232	46	Endocrinology	30	16	14
CHEMISTRY	2,217	1,510	695	Entomology	138	101	37
Analytical	384	238	146	Biological Immunology	245	130	115
Inorganic	287	203	84	Molecular Biology	741	414	324
Nuclear	5	4	1	Microbiology	384	214	169
Organic	597	437	160	Neuroscience	412	244	168
Medicinal/Pharmaceutical	115	68	46	Nutritional Sciences	137	42	95
Physical	278	201	77	Parasitology	15	9	6
Polymer	123	83	40	Toxicology	156	95	61
Theoretical	41	31	10	Human & Animal Genetics	196	105	91
Chemistry, General	286	187	88	Human & Animal Pathology	91	56	35
Chemistry, Other	101	58	43	Human & Animal Pharmacology	256	133	121
EARTH, ATMOS., & MARINE SCI.	838	605	228	Human & Animal Physiology	258	158	100
Atmospheric Physics & Chemistry	38	31	7	Zoology, Other	111	68	43
Atmospheric Dynamics	24	16	8	Biological Sciences, General	217	133	82
Meteorology	25	19	5	Biological Sciences, Other	228	122	104
Atmos. Sci./Meteorology, General	22	13	8	HEALTH SCIENCES	1,500	488	1,006
Atmos. Sci./Meteorology, Other	16	14	2	Speech-Lang. Pathology & Audiology	95	20	74
Geology	171	131	40	Environmental Health	54	37	17
Geochemistry	58	35	22	Health Systems/Services Admin.	63	27	36
Geophysics & Seismology	106	85	21	Public Health	157	49	107
Paleontology	23	16	7	Epidemiology	166	54	112
Mineralogy, Petrology	14	9	5	Exercise Physiology/Sci., Kinesiology	129	80	49
Stratigraphy, Sedimentation	24	20	4	Nursing	399	17	380
Geomorphology & Glacial Geology	20	12	8	Pharmacy	156	79	75
Geological & Related Sci., General	13	8	5	Rehabilitation/Therapeutic Services	33	11	22
Geological & Related Sci., Other	40	33	7	Veterinary Medicine	48	30	18
Environmental Science	73	43	30	Health Sciences, General	17	5	12
Hydrology & Water Resources	35	27	8	Health Sciences, Other	183	79	104
Oceanography	94	64	29	AGRICULTURAL SCIENCES	1,192	854	337
Marine Sciences	18	15	3	Agricultural Economics	155	115	40
Misc. Physical Sciences, Other	24	14	9	Agricultural Business & Management	2	2	0
ENGINEERING	5,919	5,108	769	Animal Breeding & Genetics	18	12	6
Aerospace, Aeronautic., Astronautic.	242	227	14	Animal Nutrition	45	32	13
Agricultural	73	68	5	Dairy Science	10	8	2
Bioengineering & Biomedical	207	157	50	Poultry Science	11	8	3
Ceramic Sciences	24	22	2	Fisheries Science & Management	30	22	8
Chemical	667	542	119	Animal Sciences, Other	60	44	16
Civil	587	498	83	Agronomy & Crop Science	96	77	18
Communications	40	34	6	Plant Breeding & Genetics	69	55	14
Computer	215	187	22	Plant Pathology	66	42	24
Electrical, Electronics	1,343	1,206	127	Plant Sciences, Other	37	23	14
Engineering Mechanics	86	73	13	Food Engineering	13	10	3
Engineering Physics	15	12	3	Food Sciences, Other	153	87	66
				Soil Chemistry/Microbiology	27	20	7
				Soil Sciences, Other	74	53	21
				Horticulture Science	60	47	13
				Forest Biology	20	14	6
				Forest Engineering	2	2	0
				Forest Management	27	18	9

SOURCE: NSF/NIH/NEH/USED/USDA, Survey of Earned Doctorates

APPENDIX TABLE A-1 Number of Doctorate Recipients, by Gender and Subfield, 1998

Subfield of Doctorate	Number of Doctorates			Subfield of Doctorate	Number of Doctorates		
	Total	Men	Women		Total	Men	Women
Wood Sci. & Pulp/Paper Tech.	25	21	4	Humanities, General	23	11	12
Conservation/Renewable Nat. Res.	25	14	11	Humanities, Other	159	65	94
Forestry & Related Sci., Other	69	53	16	EDUCATION	6,559	2,422	4,120
Wildlife/Range Management	55	41	14	Curriculum & Instruction	885	256	627
Agricultural Sciences, General	8	7	1	Educational Admin. & Supervision	949	402	545
Agricultural Sciences, Other	35	27	8	Educational Leadership	1,114	436	678
SOCIAL SCIENCES (INCL. PSYCH.)	7,075	3,206	3,838	Ed. Instruct. Media Design	91	45	46
Anthropology	425	183	239	Ed. Stat./Research Methods	56	29	27
Area Studies	14	3	11	Ed. Assess., Test., & Meas.	35	17	18
Criminology	55	33	22	Educational Psychology	325	112	213
Demography/Population Studies	31	18	13	School Psychology	112	31	81
Economics	973	703	267	Social/Phil. Found. of Educ.	129	47	82
Econometrics	25	21	4	Special Education	248	44	204
Geography	154	105	49	Counseling Educ./Couns. & Guidance	269	89	180
International Relations/Affairs	97	64	33	Higher Educ./Evaluation & Research	430	184	246
Political Science and Government	662	418	243	Pre-elementary/Early Childhood	54	3	51
Public Policy Analysis	97	56	41	Elementary Education	62	15	46
Sociology	549	243	304	Secondary Education	55	22	32
Statistics	60	35	21	Adult & Continuing Education	168	59	109
Urban Affairs/Studies	75	49	26	TEACHING FIELDS	951	391	558
Social Sciences, General	30	12	17	Agricultural Education	25	15	10
Social Sciences, Other	147	58	88	Art Education	46	15	31
PSYCHOLOGY	3,676	1,201	2,459	Business Education	30	19	11
Clinical	1,350	376	969	English Education	53	12	41
Cognitive & Psycholinguistics	113	62	50	Foreign Languages Education	73	32	41
Comparative	6	2	4	Health Education	70	13	57
Counseling	448	153	295	Home Economics Education	8	3	5
Developmental and Child	267	57	207	Technical/Industrial Arts Education	30	20	10
Human/Indv. & Family Development	118	28	90	Mathematics Education	115	37	78
Experimental	149	84	65	Music Education	94	54	40
Educational	61	22	39	Nursing Education	14	0	13
Family & Marriage Counseling	51	22	28	Physical Education and Coaching	108	66	42
Industrial & Organizational	189	78	110	Reading Education	77	8	69
Personality	24	9	15	Science Education	109	51	57
Physiological/Psychobiology	92	43	49	Social Science Education	15	8	7
Psychometrics	8	4	4	Technical Education	18	9	9
Quantitative	15	7	8	Trade & Industrial Education	14	11	3
School	106	25	81	Teacher Ed./Spec. Acad. & Voc., Other	52	18	34
Social	186	69	117	EDUCATION, GENERAL	235	82	145
Psychology, General	302	96	205	Education, Other	391	158	232
Psychology, Other	196	68	124	PROFESSIONAL/OTHER FIELDS	2,352	1,354	978
HUMANITIES	5,499	2,814	2,675	BUSINESS AND MANAGEMENT	1,165	783	374
History, American	407	257	150	Accounting	154	92	62
History, Asian	70	48	22	Banking/Financial Support Services	83	65	16
History, European	230	133	97	Business Admin. & Management	342	240	98
History/Philosophy of Sci. & Tech.	43	24	19	Business/Managerial Economics	56	43	13
History, General	86	56	30	International Business	33	22	11
History, Other	152	85	67	Mgmt. Info. Sys./Bus. Data Proc.	86	63	21
Classics	84	48	36	Marketing Management & Research	143	90	53
Comparative Literature	162	64	98	Operations Research	57	47	10
Linguistics	219	95	123	Organizational Behavior	103	51	52
Speech & Rhetorical Studies	168	85	83	Bus. Mgmt./Admin. Serv., General	36	23	13
Letters, General	22	11	11	Bus. Mgmt./Admin. Serv., Other	72	47	25
Letters, Other	82	31	51	COMMUNICATIONS	372	161	211
American Studies	100	48	52	Communications Research	52	17	35
Archeology	34	11	23	Mass Communications	141	71	70
Art History/Criticism/Conservation	220	55	165	Communications Theory	48	21	27
Music	694	396	294	Communications, General	62	25	37
Philosophy	408	285	120	Communications, Other	69	27	42
Religion	327	238	89	OTHER PROFESSIONAL FIELDS	721	363	356
Drama/Theater Arts	91	46	45	Architectural Environmental Design	51	30	19
LANGUAGE & LITERATURE	1,718	722	994	Home Economics	17	4	13
American	388	159	229	Law	31	18	13
English	688	296	392	Library Science	34	9	25
French	137	50	86	Parks/Recreation/Leisure/Fitness	36	28	8
German	106	41	64	Public Administration	105	57	48
Italian	33	14	19	Social Work	236	74	162
Spanish	207	93	114	Theology/Religious Education	160	123	37
Russian	43	15	28	Professional Fields, General	0	0	0
Slavic	15	8	7	Professional Fields, Other	51	20	31
Chinese	18	12	6	OTHER/UNKNOWN FIELDS**	94	52	37
Japanese	11	6	5				
Hebrew	8	4	4				
Arabic	9	5	4				
Other Language & Literature	55	19	36				

*Grand total includes 174 doctorate recipients whose gender was unknown

**Includes 20 doctorate recipients whose doctoral field was unknown.

NOTE: Field groupings may differ from those in reports published by federal sponsors of the Survey of Earned Doctorates.

APPENDIX TABLE A-2 Number of Doctorate Recipients by Citizenship, Race/Ethnicity, and Subfield, 1998

Subfield of Doctorate	Total Doctorates*	Non-U.S. Citizens Temp. Visas	U.S. Citizens and Non-U.S. with Permanent Visas								
			Total	American Indian†	Asian	Black	White	Puerto Rican	Mexican Amer.	Other Hispanic	Unkn. Race
TOTAL ALL FIELDS	42,683	8,642	30,914	189	2,720	1,586	24,153	299	421	591	955
PHYSICAL SCIENCES	6,739	2,041	4,211	19	544	93	3,297	25	35	51	147
MATHEMATICS	1,177	419	666	3	71	16	522	7	6	14	27
Applied Mathematics	265	110	145	0	17	5	107	3	3	2	8
Algebra	75	23	51	0	3	1	45	0	1	0	1
Analysis & Functional Analysis	130	51	76	0	10	1	61	0	0	1	3
Geometry	54	19	31	1	2	1	26	0	1	0	0
Logic	16	7	8	0	0	0	8	0	0	0	0
Number Theory	46	10	35	0	0	0	32	1	0	0	2
Mathematical Statistics	204	76	121	1	19	2	95	1	0	1	2
Topology	65	21	44	0	5	1	31	0	0	4	3
Computing Theory & Practice	18	11	6	0	0	0	5	1	0	0	0
Operations Research	17	5	11	0	1	0	9	0	0	1	0
Mathematics, General	163	44	64	1	10	1	42	0	1	2	7
Mathematics, Other	124	42	74	0	4	4	61	1	0	3	1
COMPUTER SCIENCE	923	309	551	3	91	14	406	2	3	9	23
Computer Science	817	290	468	3	82	8	345	1	3	6	20
Information Sciences & Systems	106	19	83	0	9	6	61	1	0	3	3
PHYSICS & ASTRONOMY	1,584	499	962	3	124	11	768	2	6	12	36
Astronomy	91	17	65	1	5	0	52	0	0	0	7
Astrophysics	117	28	83	0	8	1	69	1	1	0	3
Acoustics	18	7	9	0	0	0	9	0	0	0	0
Chemical & Atomic/Molecular	99	32	65	0	12	0	47	0	0	1	5
Elementary Particle	173	65	105	0	12	1	89	0	1	2	0
Fluids	26	12	14	0	0	0	13	0	0	1	0
Nuclear	92	21	64	0	3	1	56	1	0	1	2
Optics	104	35	68	0	11	1	53	0	0	2	1
Plasma & High-Temperature	55	13	41	0	7	0	30	0	0	2	2
Polymer	24	10	14	1	3	0	10	0	0	0	0
Solid State & Low-Temperature	313	132	176	0	25	2	143	0	1	1	4
Physics, General	190	56	109	1	19	2	79	0	1	1	6
Physics, Other	282	71	149	0	19	3	118	0	2	1	6
CHEMISTRY	2,217	610	1,455	7	207	43	1,123	9	15	10	41
Analytical	384	105	264	0	35	14	201	4	2	2	6
Inorganic	287	63	213	1	23	2	178	1	4	2	2
Nuclear	5	1	4	0	0	0	4	0	0	0	0
Organic	597	175	407	1	59	10	325	1	4	2	5
Medicinal/Pharmaceutical	115	33	69	0	13	5	46	0	0	0	5
Physical	278	73	200	2	26	6	157	2	3	2	2
Polymer	123	47	72	0	22	3	47	0	0	0	0
Theoretical	41	17	23	1	1	0	20	0	0	0	1
Chemistry, General	286	66	135	2	17	0	100	1	1	1	13
Chemistry, Other	101	30	68	0	11	3	45	0	1	1	7
EARTH, ATMOS., & MARINE SCI.	838	204	577	3	51	9	478	5	5	6	20
Atmospheric Physics & Chem.	38	7	29	0	2	0	25	1	0	0	1
Atmospheric Dynamics	24	7	17	0	4	1	11	0	0	0	1
Meteorology	25	6	17	0	2	0	15	0	0	0	0
Atmos.Sci./Meteorology, General	22	7	10	0	1	1	8	0	0	0	0
Atmos.Sci./Meteorology, Other	16	3	12	0	0	0	10	0	0	0	2
Geology	171	39	119	1	3	1	107	0	2	0	5
Geochemistry	58	11	45	2	6	1	34	0	0	2	0
Geophysics & Seismology	106	42	59	0	9	1	44	0	1	0	4
Paleontology	23	7	16	0	0	0	15	1	0	0	0
Mineralogy, Petrology	14	2	11	0	1	0	9	0	0	1	0
Stratigraphy, Sedimentation	24	8	15	0	1	0	14	0	0	0	0
Geomorphology & Glacial Geol.	20	1	19	0	0	0	18	0	0	1	0
Geological & Related Sci., General	13	4	8	0	1	0	6	0	1	0	0
Geological & Related Sci., Other	40	7	29	0	5	1	21	0	0	0	2
Environmental Science	73	17	48	0	7	3	37	0	0	0	1
Hydrology & Water Resources	35	10	25	0	3	0	21	0	0	0	1
Oceanography	94	21	64	0	4	0	54	2	1	2	1
Marine Sciences	18	1	16	0	1	0	13	1	0	0	1
Misc. Physical Sciences, Other	24	4	18	0	1	0	16	0	0	0	1
ENGINEERING	5,919	2,392	3,021	13	555	84	2,160	17	30	63	99
Aerospace, Aeronautic., Astronautic.	242	66	151	0	12	2	125	1	3	1	7
Agricultural	73	37	29	1	3	1	23	0	0	0	1
Bioengineering & Biomedical	207	50	147	1	32	0	110	0	0	1	3
Ceramic Science	24	8	15	1	2	0	12	0	0	0	0
Chemical	667	282	340	3	55	3	258	3	1	6	11
Civil	587	262	258	0	33	8	191	1	5	9	11
Communications	40	20	19	0	11	0	8	0	0	0	0
Computer	210	94	105	1	31	2	64	0	1	4	2

NOTE: Field groupings may differ from those in reports published by federal sponsors of the Survey of Earned Doctorates. See inside the back cover for a description of fields as reported in this table.

Refer also to the explanatory note about this table in front of Appendix A.

*Includes 3,127 individuals who did not report their citizenship at time of doctorate. See the "Important Notice" at the front of this packet for discussion of item response rate issues.

†Includes Alaskan Native.

APPENDIX TABLE A-2 Number of Doctorate Recipients by Citizenship, Race/Ethnicity, and Subfield, 1998

Subfield of Doctorate	Total Doctorates*	Non-U.S. Citizens Temp. Visas	U.S. Citizens and Non-U.S. with Permanent Visas								
			Total	American Indian†	Asian	Black	White	Puerto Rican	Mexican Amer.	Other Hispanic	Unkn. Race
Electrical, Electronics	50	13	31	0	3	3	21	0	0	1	3
Engineering Mechanics	63	22	35	0	5	2	25	0	0	1	2
Engineering Physics	227	113	99	0	11	8	70	3	3	1	3
Engineering Science	482	185	266	0	46	10	192	1	4	3	10
Environmental Health Engineering	936	391	466	2	83	13	335	4	2	10	17
Industrial/Manufacturing	59	21	32	1	7	0	21	0	0	0	3
Materials Science	21	10	8	0	2	1	5	0	0	0	0
Mechanical	97	30	55	0	5	1	44	0	1	2	2
Metallurgical	29	9	14	1	3	0	9	0	0	0	1
Mining & Mineral	62	27	32	0	5	2	22	0	1	1	1
Nuclear	48	38	8	0	0	0	6	0	0	1	1
Ocean	59	33	24	0	10	0	12	0	0	2	0
Operations Research	68	21	41	0	6	1	33	0	0	0	1
Petroleum	30	4	7	0	3	0	4	0	0	0	0
Polymer/Plastics	194	70	109	0	15	5	81	0	2	1	5
Systems	68	21	41	0	6	1	33	0	0	0	1
Engineering, General	30	4	7	0	3	0	4	0	0	0	0
Engineering, Other	194	70	109	0	15	5	81	0	2	1	5
LIFE SCIENCES	8,540	1,946	6,020	25	800	193	4,609	53	79	111	150
BIOLOGICAL SCIENCES	5,848	1,230	4,279	12	658	108	3,226	43	54	72	106
Biochemistry	798	195	554	4	114	13	394	5	8	7	9
Biomedical Sciences	184	35	116	0	32	2	71	2	2	1	6
Biophysics	166	43	117	0	31	1	78	0	1	1	5
Biotechnology Research	12	8	4	0	0	0	4	0	0	0	0
Bacteriology	13	4	9	0	0	1	8	0	0	0	0
Plant Genetics	40	10	29	0	5	0	22	2	0	0	0
Plant Pathology	18	9	8	0	0	0	7	0	0	0	1
Plant Physiology	61	25	33	0	3	1	29	0	0	0	0
Botany, Other	113	26	81	1	8	0	66	2	2	0	2
Anatomy	35	6	27	0	5	0	19	0	0	1	2
Biometrics and Biostatistics	75	31	44	0	15	2	25	0	0	1	1
Cell Biology	299	45	241	1	48	3	165	1	8	10	5
Ecology	292	31	246	1	2	5	231	1	0	2	4
Developmental Biology/Embryology	127	28	98	0	21	2	73	1	0	1	0
Endocrinology	30	8	22	0	1	1	18	0	0	2	0
Entomology	138	39	85	0	7	2	70	1	2	3	0
Biological Immunology	245	37	200	0	26	6	156	2	1	2	7
Molecular Biology	741	194	506	2	103	8	360	5	5	11	12
Microbiology	384	95	276	1	40	6	209	2	3	6	9
Neuroscience	412	70	332	2	58	13	235	3	2	6	13
Nutritional Sciences	137	29	92	0	8	5	75	1	3	0	0
Parasitology	15	4	11	0	1	1	8	1	0	0	0
Toxicology	156	17	134	0	13	4	110	0	4	1	2
Human & Animal Genetics	196	32	153	0	16	3	122	2	2	4	4
Human & Animal Pathology	91	16	69	0	12	1	51	1	1	0	3
Human & Animal Pharmacology	256	63	181	0	36	9	125	3	1	3	4
Human & Animal Physiology	258	48	201	0	26	12	153	2	1	4	3
Zoology, Other	111	8	101	0	3	0	93	1	2	1	1
Biological Sciences, General	217	27	149	0	10	4	119	4	3	2	7
Biological Sciences, Other	228	47	160	0	14	3	130	1	3	3	6
HEALTH SCIENCES	1,500	239	1,116	4	84	62	903	7	15	14	27
Speech-Lang. Pathology & Audiology	95	11	78	1	4	11	62	0	0	0	0
Environmental Health	54	17	30	0	5	0	24	0	0	1	0
Health Systems/Services Admin.	63	8	52	0	5	2	44	0	0	1	0
Public Health	157	19	132	2	13	9	101	1	2	3	1
Epidemiology	166	21	133	0	9	5	110	0	2	3	4
Exercise Physiology/Sci., Kinesiology	129	20	103	0	2	1	95	3	0	1	1
Nursing	399	27	345	1	12	21	295	0	7	2	7
Pharmacy	156	68	77	0	17	4	48	2	1	2	3
Rehabilitation/Therapeutic Services	33	1	31	0	3	2	26	0	0	0	0
Veterinary Medicine	48	13	31	0	2	2	23	0	1	0	3
Health Sciences, General	17	2	14	0	0	2	12	0	0	0	0
Health Sciences, Other	183	32	90	0	12	3	63	1	2	1	8
AGRICULTURAL SCIENCES	1,192	477	625	9	58	23	480	3	10	25	17
Agricultural Economics	155	58	84	0	11	4	63	0	0	2	4
Agricultural Business & Management	2	1	1	0	0	0	0	0	0	1	0
Animal Breeding & Genetics	18	6	9	0	0	0	9	0	0	0	0
Animal Nutrition	45	14	28	1	0	0	25	0	1	0	1
Dairy Science	10	5	3	0	0	0	3	0	0	0	0
Poultry Science	11	7	2	0	1	0	1	0	0	0	0
Fisheries Science & Management	60	18	40	0	3	0	32	0	3	2	0
Animal Sciences, Other	96	37	42	1	7	2	29	1	0	2	0
Agronomy & Crop Science	69	29	34	2	3	2	23	0	1	1	2
Plant Breeding & Genetics	66	35	28	0	3	2	16	2	0	4	1
Plant Pathology	37	21	14	0	0	1	11	0	2	0	0
Plant Sciences, Other	13	6	7	0	1	1	5	0	0	0	0
Food Engineering	153	84	61	0	14	3	40	0	1	3	0
Food Sciences, Other	27	14	12	0	0	0	12	0	0	0	0
Soil Chemistry/Microbiology	74	25	43	0	5	1	33	0	0	3	1
Soil Sciences, Other	60	25	29	0	1	1	25	0	0	1	1

SOURCE: NSF/NIH/NEH/USED/USDA, Survey of Earned Doctorates

APPENDIX TABLE A-2 Number of Doctorate Recipients by Citizenship, Race/Ethnicity, and Subfield, 1998

Subfield of Doctorate	Total Doctorates*	Non-U.S. Citizens Temp. Visas	U.S. Citizens and Non-U.S. with Permanent Visas								
			Total	American Indian†	Asian	Black	White	Puerto Rican	Mexican Amer.	Other Hispanic	Unkn. Race
Horticulture Science	30	7	21	1	2	0	17	0	0	1	0
Forest Biology	20	7	13	0	0	1	12	0	0	0	0
Forest Engineering	2	1	1	0	1	0	0	0	0	0	0
Forest Management	27	9	18	0	2	1	14	0	1	0	0
Wood Sci. & Pulp/Paper Tech.	25	13	10	0	1	0	8	0	0	1	0
Conservation/Renewable Nat. Res.	25	9	16	0	0	1	12	0	0	0	2
Forestry & Related Sci., Other	69	21	41	2	3	0	33	0	0	0	3
Wildlife/Range Management	55	10	45	2	0	0	41	0	0	1	1
Agricultural Sciences, General	8	3	4	0	0	1	2	0	0	0	1
Agricultural Sciences, Other	35	12	19	0	0	2	14	0	1	1	1
SOCIAL SCIENCES (INCL. PSYCH.)	7,075	912	5,611	42	299	301	4,467	81	89	142	190
Anthropology	425	46	351	5	18	11	272	1	10	10	24
Area Studies	14	4	10	0	1	1	6	0	2	0	0
Criminology	55	7	48	0	1	7	34	1	1	3	1
Demography/Population Studies	31	10	13	0	0	1	11	0	1	0	0
Economics	973	396	480	0	71	18	359	3	4	15	10
Econometrics	25	16	9	0	3	1	4	0	0	1	0
Geography	154	22	114	0	5	3	103	1	0	2	0
International Relations/Affairs	97	16	73	0	8	7	53	1	1	3	0
Political Science and Government	662	71	542	3	26	32	446	2	12	9	12
Public Policy Analysis	97	15	79	0	5	5	63	0	0	3	3
Sociology	549	81	427	3	23	38	337	2	5	7	12
Statistics	60	29	23	0	7	1	14	0	0	1	0
Urban Affairs/Studies	75	17	52	0	7	6	39	0	0	0	0
Social Sciences, General	30	4	24	0	3	1	19	0	0	0	1
Social Sciences, Other	147	27	107	0	7	14	77	1	0	3	5
PSYCHOLOGY	3,676	150	3,255	31	113	155	2,627	69	53	85	122
Clinical	1,350	19	1,251	15	45	56	1,006	28	25	38	38
Cognitive & Psycholinguistics	113	21	88	0	3	0	79	0	1	3	2
Comparative	6	0	6	1	0	0	5	0	0	0	0
Counseling	448	10	423	4	15	30	348	5	7	9	5
Developmental and Child	267	13	249	1	10	11	174	1	2	6	44
Human/Indv. & Family Development	118	13	99	0	5	7	83	1	0	1	2
Experimental	149	8	140	1	6	2	126	0	4	0	1
Educational	61	6	53	0	0	5	43	0	2	1	2
Family & Marriage Counseling	51	2	48	0	0	0	45	0	1	0	2
Industrial & Organizational	189	5	172	2	6	10	137	14	1	1	1
Personality	24	1	23	0	0	5	18	0	0	0	0
Physiological/Psychobiology	92	13	77	1	3	1	67	0	0	3	2
Psychometrics	8	2	6	0	0	0	6	0	0	0	0
Quantitative	15	5	10	0	1	0	7	1	0	1	0
School	106	0	101	0	3	5	90	0	1	1	1
Social	186	17	165	2	7	7	137	1	4	2	5
Psychology, General	302	6	202	4	9	7	143	16	3	7	13
Psychology, Other	196	10	146	0	1	9	116	2	2	12	4
HUMANITIES	5,499	537	4,579	22	218	159	3,820	38	60	103	159
History, American	407	12	387	3	15	22	328	0	6	4	9
History, Asian	70	10	54	0	14	0	37	0	0	0	3
History, European	230	14	215	1	3	1	198	0	0	3	9
History/Philosophy of Sci. & Tech.	43	5	34	0	0	0	31	0	1	0	2
History, General	86	4	51	0	0	2	35	2	1	2	9
History, Other	152	15	130	1	4	10	103	3	4	1	4
Classics	84	12	70	0	2	2	61	0	1	1	3
Comparative Literature	162	29	124	1	11	6	92	2	1	3	8
Linguistics	219	66	136	0	22	4	103	1	1	4	1
Speech & Rhetorical Studies	168	7	153	1	2	2	143	0	3	2	0
Letters, General	22	2	20	0	0	0	19	0	1	0	0
Letters, Other	82	4	76	0	3	3	63	2	1	2	2
American Studies	100	4	94	1	1	16	73	1	1	0	1
Archeology	34	6	27	0	0	0	25	0	0	0	2
Art History/Criticism/Conservation	220	21	189	0	2	3	169	1	3	1	10
Music	694	95	522	2	53	20	412	3	1	14	17
Philosophy	408	35	323	2	11	7	282	3	1	5	12
Religion	327	27	284	3	18	9	245	2	2	2	3
Drama/Theater Arts	91	7	79	0	0	4	72	0	0	0	3
LANGUAGE & LITERATURE	1,718	148	1,466	7	49	37	1,218	18	32	58	47
American	388	12	374	1	12	21	318	3	10	3	6
English	688	44	597	3	20	11	531	1	8	3	20
French	137	12	119	1	2	2	100	1	1	3	9
German	106	19	84	0	2	0	79	0	0	1	2
Italian	33	7	20	0	0	0	16	0	1	1	2
Spanish	207	40	152	1	4	2	77	13	10	44	1
Russian	43	4	38	0	0	0	36	0	0	0	2
Slavic	15	0	11	1	0	0	9	0	0	0	1
Chinese	18	3	13	0	4	1	8	0	0	0	0
Japanese	11	0	11	0	3	0	8	0	0	0	0
Hebrew	8	1	7	0	0	0	6	0	0	0	1
Arabic	9	0	8	0	1	0	5	0	0	1	1
Other Language & Literature	55	6	32	0	1	0	25	0	2	2	2

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			Total	American Indian†	Asian	Black	White	Puerto Rican	Mexican Amer.	Other Hispanic	Unkn. Race
Humanities, General	23	0	23	0	0	3	19	0	0	0	1
Humanities, Other	159	14	122	0	8	8	92	0	0	1	13
EDUCATION	6,559	424	5,700	50	180	646	4,390	71	114	97	152
Curriculum & Instruction	885	71	766	7	23	57	613	18	21	15	12
Educational Admin. & Supervision	949	37	867	9	9	129	670	10	14	14	12
Educational Leadership	1,114	23	1,043	8	23	166	755	5	28	15	43
Educ./Instruct. Media Design	91	7	80	0	5	6	67	0	1	0	1
Educ. Stat./Research Methods	56	8	48	0	5	5	36	1	0	1	0
Educ. Assess., Test., & Meas.	35	5	30	0	5	1	23	0	0	0	1
Educational Psychology	325	26	275	1	12	14	227	2	6	5	8
School Psychology	112	5	107	1	0	8	90	3	3	1	1
Social/Phil. Found. Of Educ.	129	13	110	1	6	20	73	0	5	4	1
Special Education	248	18	224	3	9	24	175	2	4	4	3
Counseling Educ./Couns. & Guidance	269	12	246	3	3	25	201	8	3	0	3
Higher Educ./Evaluation & Research	430	22	402	3	15	65	302	4	4	5	4
Pre-elementary/Early Childhood	54	7	47	0	1	6	39	0	0	0	1
Elementary Education	62	5	52	2	2	6	39	0	1	1	1
Secondary Education	55	2	52	0	0	4	27	0	1	1	19
Adult & Continuing Education	168	11	147	2	6	7	124	1	0	5	2
TEACHING FIELDS	951	122	789	7	32	63	636	13	11	14	13
Agricultural Education	25	8	15	2	0	2	11	0	0	0	0
Art Education	46	9	32	1	0	2	26	1	0	1	1
Business Education	30	2	26	1	0	1	23	0	0	1	0
English Education	53	5	48	0	4	8	33	3	0	0	0
Foreign Languages Education	73	19	50	0	8	3	30	3	1	3	2
Health Education	70	2	67	0	3	7	53	0	3	0	1
Home Economics Education	8	0	8	0	0	1	7	0	0	0	0
Technical/Industrial Arts Education	30	1	29	0	1	3	22	0	0	1	2
Mathematics Education	115	12	98	0	3	10	80	0	3	2	0
Music Education	94	7	85	0	2	5	70	0	2	3	3
Nursing Education	14	0	14	0	0	2	11	0	1	0	0
Physical Education and Coaching	108	21	81	1	3	3	71	2	0	0	1
Reading Education	77	6	70	0	1	6	58	2	1	2	0
Science Education	109	18	88	1	5	1	76	2	0	1	2
Social Science Education	15	3	9	0	0	0	9	0	0	0	0
Technical Education	18	3	14	1	0	1	12	0	0	0	0
Trade & Industrial Education	14	2	11	0	1	0	10	0	0	0	0
Teacher Ed./Spec. Acad. & Voc., Other	52	4	44	0	1	8	34	0	0	0	1
Education, General	235	5	121	1	10	15	69	1	4	2	19
Education, Other	391	25	294	2	14	25	224	3	8	10	8
PROFESSIONAL/OTHER FIELDS	2,352	390	1,772	18	124	110	1,410	14	14	24	58
BUSINESS AND MANAGEMENT	1,165	248	841	9	68	44	665	5	3	14	33
Accounting	154	26	124	3	4	6	107	0	0	2	2
Banking/Financial Support Services	83	30	46	0	7	2	36	0	0	0	1
Business Admin. & Management	342	58	247	3	17	14	194	1	1	1	16
Business/Managerial Economics	56	12	41	0	7	1	28	0	1	2	2
International Business	33	9	24	0	2	1	20	0	0	1	0
Mgmt. Info. Sys./Bus. Data Proc.	86	26	52	0	8	2	39	1	0	2	0
Marketing Management & Research	143	33	106	1	11	4	84	2	1	1	2
Operations Research	57	29	26	1	4	0	18	0	0	2	1
Organizational Behavior	103	9	92	0	6	5	77	0	0	1	3
Bus. Mgmt./Admin. Serv., General	36	4	28	0	0	4	21	0	0	0	3
Bus. Mgmt./Admin. Serv., Other	72	12	55	1	2	5	41	1	0	2	3
COMMUNICATIONS	372	43	307	2	14	23	253	2	4	2	7
Communications Research	52	5	47	0	3	2	38	1	2	1	0
Mass Communications	141	28	109	2	6	9	88	0	1	1	2
Communications Theory	48	1	46	0	3	1	40	1	0	0	1
Communications, General	62	6	46	0	1	3	41	0	0	0	1
Communications, Other	69	3	59	0	1	8	46	0	1	0	3
OTHER PROFESSIONAL FIELDS	721	89	596	7	41	42	471	7	6	8	14
Architectural Environmental Design	51	19	24	1	3	1	16	0	1	1	1
Home Economics	17	1	15	0	0	2	11	1	0	0	1
Law	31	13	14	1	1	0	11	0	0	1	0
Library Science	34	2	31	0	3	3	25	0	0	0	0
Parks/Recreation/Leisure/Fitness	36	7	25	0	2	0	18	2	0	1	2
Public Administration	105	11	88	0	3	10	67	0	2	2	4
Social Work	236	17	210	3	12	18	168	3	3	2	1
Theology/Religious Education	160	14	143	1	13	4	121	1	0	1	2
Professional Fields, General	0	0	0	0	0	0	0	0	0	0	0
Professional Fields, Other	51	5	46	1	4	4	34	0	0	0	3
OTHER/UNKNOWN FIELDS	94	10	28	0	1	1	21	0	1	0	4

NOTE: Field groupings may differ from those in reports published by federal sponsors of the Survey of Earned Doctorates.

*Includes 3,127 individuals who did not report their citizenship at time of doctorate. See the "Important Notice" for discussion of item response rate issues.

†Includes Alaskan Native.

APPENDIX TABLE A-3a Statistical Profile of Doctorate Recipients by Major Field, 1998

Total All Doctorates

	1998 Total	Physics and Astronomy	Chemistry	Earth, Atmos., and Marine Sci.	Mathematics	Computer Sciences	PHYSICAL SCIENCES	ENGINEERING	Biochemistry	Other Biosciences	Health Sciences	Agricultural Sciences	LIFE SCIENCES	
Number in Field	42,683	1,584	2,217	838	1,177	923	6,739	5,919	798	5,050	1,500	1,192	8,540	
Men	%	57.8	85.5	68.1	72.2	74.1	82.7	75.7	86.3	56.1	56.4	32.5	71.6	54.3
Women		41.8	14.1	31.3	27.2	25.2	17.0	23.7	13.0	43.7	43.2	67.1	28.3	45.4
Unknown*		0.4	0.4	0.5	0.6	0.7	0.3	0.5	0.7	0.1	0.3	0.4	0.1	0.3
U.S. Citizenship	%	66.1	52.5	57.5	61.2	48.7	50.6	54.3	43.0	57.8	64.7	69.0	44.2	61.9
Non-U.S., Permanent Visa		6.3	8.2	8.1	7.6	7.9	9.1	8.2	8.1	11.7	9.1	5.4	8.2	8.6
Non-U.S., Temporary Visa		20.2	31.5	27.5	24.3	35.6	33.5	30.3	40.4	24.4	20.5	15.9	40.0	22.8
Unknown		7.3	7.8	6.9	6.8	7.8	6.8	7.2	8.5	6.1	5.7	9.7	7.6	6.7
Never Married	%	26.3	38.9	33.4	27.3	36.4	27.2	33.6	31.3	28.9	30.3	19.8	19.3	26.8
Married		53.6	44.8	51.7	56.4	48.1	55.9	50.6	55.0	56.6	53.5	56.5	66.9	56.2
Separated, Divorced		5.9	2.8	2.5	4.4	2.8	4.3	3.1	2.3	2.6	4.0	7.7	4.2	4.6
Marriage-like Relationship		3.8	4.0	3.9	4.1	3.7	2.7	3.7	2.7	4.1	4.4	2.7	1.8	3.7
Widowed		0.3	0.0	0.0	0.1	0.2	0.0	0.0	0.1	0.0	0.1	0.4	0.1	0.1
Unknown		10.1	9.5	8.5	7.6	8.9	9.9	8.9	8.7	7.6	7.7	12.9	7.8	8.6
Median Age at Doct.	Yrs	33.7	30.1	29.6	33.7	30.7	33.2	30.7	31.6	30.4	31.3	38.5	34.6	32.3
Percent with Bacc. In Same Field as Doctorate	%	51.8	69.8	71.3	48.6	65.7	36.3	62.4	71.0	28.3	53.9	43.7	47.6	48.9
Percent with Masters	%	73.5	65.5	38.9	74.3	71.9	81.4	61.1	82.3	33.3	42.9	78.8	85.8	54.3
Median Time Lapse from Bacc. To Doct.														
Total Time Registered Time	Yrs	10.4 7.3	7.6 6.9	6.8 6.0	10.5 7.5	8.0 6.7	10.4 7.6	8.0 6.7	8.9 6.7	8.0 6.8	8.3 6.9	14.8 8.0	11.0 7.0	9.1 7.0
Postdoctoral Study Plans	%	24.4	47.3	47.5	40.7	24.8	12.6	37.9	18.8	70.6	65.4	16.4	31.7	52.6
Fellowship		12.9	17.0	21.0	17.8	13.3	3.7	16.0	6.0	43.9	40.5	9.9	10.2	31.2
Research Assoc.		9.5	29.3	25.2	22.1	10.0	7.8	20.7	11.5	20.8	19.7	5.1	19.8	17.2
Traineeship		0.8	0.5	0.5	0.7	0.8	0.8	0.6	0.8	1.0	1.2	0.7	1.0	1.1
Other Study		1.1	0.5	0.7	0.1	0.7	0.3	0.5	0.6	4.9	4.0	0.7	0.7	3.0
Planned Employment After Doctorate	%	63.3	41.9	42.2	49.4	63.6	77.2	51.6	70.1	20.4	25.9	68.7	57.1	37.3
Educ. Institution**		32.3	7.1	7.4	15.8	32.6	25.1	15.2	10.7	4.8	9.0	35.9	20.3	14.9
Industry/Business		17.7	26.6	30.2	20.9	22.6	43.6	28.7	48.0	9.4	7.8	11.8	18.0	10.1
Government		4.5	3.4	1.8	5.8	2.9	4.3	3.2	7.0	0.9	2.6	7.9	10.7	4.5
Nonprofit		3.0	0.5	0.3	1.3	1.0	1.2	0.7	1.3	0.5	1.0	6.5	2.7	2.1
Other & Unknown		5.7	4.4	2.5	5.6	4.5	3.0	3.8	3.2	4.9	5.6	6.7	5.4	5.7
Postdoc. Plans Unknown	%	12.4	10.7	10.3	9.9	11.6	10.2	10.6	11.0	9.0	8.7	14.9	11.2	10.2
Definite Postdoc. Study	%	17.7	38.1	38.0	29.5	17.5	9.1	29.4	12.2	55.0	49.7	11.7	19.2	39.3
Seeking Postdoc. Study		6.6	9.3	9.5	11.2	7.3	3.5	8.4	6.6	15.5	15.6	4.7	12.5	13.3
Definite Employment		43.1	26.4	28.6	32.1	42.0	55.7	34.6	49.5	12.0	16.6	50.6	36.6	24.9
Seeking Employment		20.1	15.5	13.6	17.3	21.7	21.6	17.0	20.6	8.4	9.3	18.1	20.6	12.3
Employment Commitments After Doctorate		18,409	418	635	269	494	514	2,330	2,930	96	837	759	436	2,128
Primary Activity+														
R & D	%	31.8	61.5	70.1	47.6	37.9	62.1	57.3	72.0	42.7	36.8	31.1	50.2	37.8
Teaching		36.6	13.9	17.2	24.2	43.9	24.3	24.6	9.7	15.6	23.8	40.7	22.2	29.1
Administration		12.0	1.7	1.3	1.9	0.8	3.1	1.7	2.2	3.1	4.2	8.6	5.0	5.9
Prof. Services		13.8	14.8	6.1	17.5	9.5	7.4	10.0	11.2	17.7	16.2	13.6	15.1	15.1
Other		1.9	3.1	1.4	4.1	2.0	1.6	2.2	2.3	2.1	1.7	1.4	3.4	2.0
Secondary Activity														
R & D	%	34.0	26.8	21.3	34.2	45.5	28.6	30.5	21.3	26.0	27.5	38.1	31.9	32.1
Teaching		17.5	6.7	6.8	13.4	16.4	16.0	11.6	13.9	8.3	15.2	18.1	20.9	17.1
Administration		14.4	16.5	26.5	13.0	5.9	12.5	15.7	19.3	17.7	14.0	15.3	14.2	14.7
Prof. Services		14.2	16.5	15.1	16.7	11.9	12.3	14.2	16.9	12.5	12.5	15.0	14.9	13.9
Other		1.4	0.7	0.8	3.7	0.8	1.2	1.2	1.7	1.0	1.0	1.2	1.6	1.2
No Secondary Activity		14.8	27.8	26.0	14.5	13.8	28.0	22.8	24.3	16.7	12.9	7.8	12.6	11.2
Activity(ies) Unknown	%	3.8	5.0	3.6	4.5	5.7	1.6	3.9	2.6	17.7	17.0	4.6	3.9	9.9
Region of Employment After Doctorate+														
New England	%	6.4	6.7	10.1	3.0	5.3	7.4	7.0	6.3	8.3	7.9	6.2	2.8	6.3
Middle Atlantic		14.2	15.3	21.1	9.3	14.0	19.6	16.9	12.5	16.7	14.5	9.9	7.1	11.4
East No. Central		13.3	12.7	15.3	6.3	16.6	8.4	12.5	11.9	15.6	11.8	14.4	9.9	12.5
West No. Central		6.8	4.1	6.8	2.2	8.5	4.9	5.7	4.4	3.1	6.5	7.9	10.1	7.6
South Atlantic		16.0	12.9	13.4	15.6	16.4	14.8	14.5	11.6	16.7	15.9	18.4	7.8	15.2
East So. Central		4.3	2.4	2.5	1.1	4.7	2.5	2.8	2.5	1.0	3.7	5.4	4.6	4.4
West So. Central		8.4	7.2	6.5	21.2	6.9	6.4	8.4	9.2	7.3	5.5	9.1	6.0	7.0
Mountain		5.3	6.0	3.1	11.5	5.3	3.5	5.2	5.5	6.3	5.1	4.3	7.3	5.4
Pacific & Insular		13.9	25.9	12.4	17.5	9.9	23.9	17.4	22.8	12.5	15.5	10.5	9.9	12.5
U.S., Region Unknown		0.8	0.2	0.6	1.5	0.6	1.0	0.7	0.5	2.1	1.8	1.1	1.1	1.4
Foreign		9.9	5.8	7.1	10.4	11.4	7.0	8.1	12.2	9.4	11.0	11.7	32.8	15.6
Region Unknown		0.7	0.7	1.1	0.4	0.4	0.6	0.7	0.8	1.0	0.8	1.1	0.7	0.9

NOTE: Field groupings may differ from those in reports published by federal sponsors of the Survey of Earned Doctorates. Physical Sciences includes Mathematics and Computer Sciences, as well as Physics/Astronomy, Chemistry, and Earth/Atmospheric/Marine Sciences

APPENDIX TABLE A-3a Statistical Profile of Doctorate Recipients by Major Field, 1998

Total All Doctorates

Psychology	Economics	Anthropology and Sociology	Political Sci./ International Rel.	Other Social Sciences	SOCIAL SCI. INCL. PSYCH.	TOTAL SCIENCES & ENGINEERING	History	Eng. and Amer. Lang. and Lit.	Foreign Lang. and Lit.	Other Humanities	HUMANITIES	EDUCATION	Business and Management	Other Professional Fields	Other Fields/ Unknown***	PROFESSIONAL/ OTHER FIELDS	TOTAL NONSCIENCES
3,681	998	974	759	663	7,075	28,273	988	1,076	642	2,793	5,499	6,559	1,165	1,093	94	2,352	14,390
32.7	72.5	43.7	63.5	55.7	45.3	63.9	61.0	42.3	41.6	53.3	51.2	36.9	67.2	47.9	55.3	57.8	45.7
66.8	27.2	55.7	36.4	43.4	54.2	35.7	39.0	57.7	58.1	46.4	48.6	62.8	32.1	51.9	39.4	41.6	54.0
0.4	0.3	0.5	0.1	0.9	0.4	0.5	0.0	0.0	0.3	0.3	0.2	0.3	0.7	0.2	5.3	0.6	0.3
86.0	41.0	75.2	76.2	64.3	75.1	59.4	84.0	87.9	63.1	73.8	77.1	84.3	65.7	78.2	26.2	69.9	79.3
2.5	8.0	4.7	4.9	6.6	4.2	7.3	4.1	2.3	14.0	6.5	6.1	2.6	6.5	4.4	3.2	5.4	4.4
4.1	41.3	13.0	11.5	20.4	12.9	25.8	6.1	5.2	14.3	11.8	9.8	6.5	21.3	12.1	10.6	16.6	9.4
7.4	9.7	7.1	7.5	8.7	7.8	7.5	5.8	4.6	8.6	7.9	7.0	6.6	6.5	5.3	59.6	8.1	6.9
26.8	32.5	24.4	25.6	24.4	26.9	29.4	24.0	27.5	26.3	28.1	27.1	14.2	20.0	22.9	5.3	20.7	20.2
44.5	51.2	52.4	53.5	55.4	48.5	52.7	56.4	47.7	48.9	49.3	50.2	59.6	57.4	56.7	14.9	55.4	55.4
7.0	3.8	9.3	6.5	6.2	6.7	4.3	7.6	8.6	9.5	6.4	7.4	10.9	7.5	9.1	2.1	8.0	9.1
5.4	3.5	5.4	4.6	4.2	4.9	3.8	4.9	8.2	6.5	5.1	5.8	2.6	3.0	3.1	2.1	3.0	3.9
0.2	0.4	0.1	0.1	0.8	0.3	0.1	0.3	0.4	0.5	0.2	0.3	0.9	0.1	0.8	0.0	0.4	0.6
16.2	8.6	8.3	9.7	9.0	12.7	9.7	6.9	7.6	8.3	10.9	9.2	12.0	12.0	7.4	75.5	12.4	10.9
32.5	31.8	35.1	33.0	36.0	33.2	31.9	34.8	34.4	34.6	35.6	35.1	44.3	36.0	39.3	37.7	37.5	39.2
58.5	56.2	73.9	52.7	21.3	56.2	58.6	51.7	64.1	0.0	49.3	46.9	35.0	33.0	27.9	8.5	29.6	38.7
74.7	71.8	86.1	78.3	87.3	77.5	67.6	83.6	83.7	83.3	82.7	83.2	87.7	79.8	90.9	27.7	82.9	85.3
9.0	9.0	11.0	10.0	12.5	9.9	9.0	11.5	11.0	11.0	12.0	11.6	20.0	12.6	15.3	12.9	13.7	14.9
7.1	7.0	8.7	7.9	8.0	7.5	7.0	8.6	8.4	8.4	8.9	8.7	8.4	7.7	8.0	7.5	8.0	8.4
28.0	6.6	17.6	10.1	13.1	20.2	33.9	9.2	6.6	7.5	6.7	7.2	4.7	3.9	5.8	3.2	4.8	5.7
20.8	2.8	11.2	7.0	7.4	14.2	18.0	6.2	4.9	3.4	4.0	4.5	1.8	1.3	2.0	3.2	1.7	2.8
4.5	2.8	5.0	2.2	4.5	4.1	13.6	1.5	0.3	2.0	1.4	1.3	1.6	2.0	2.4	0.0	2.1	1.5
2.0	0.5	0.6	0.3	0.9	1.3	1.0	0.4	0.2	0.9	0.4	0.4	0.6	0.3	0.6	0.0	0.5	0.5
0.6	0.5	0.7	0.7	0.3	0.6	1.3	1.1	1.2	1.1	0.9	1.0	0.6	0.3	0.7	0.0	0.5	0.8
54.2	82.8	71.3	78.4	73.3	65.0	54.5	80.1	83.4	81.8	79.3	80.5	80.5	82.1	83.7	22.3	80.5	80.6
21.3	41.6	48.0	51.0	38.0	32.6	18.5	59.2	65.5	63.9	56.6	59.7	60.9	60.8	50.3	16.0	54.1	59.4
12.0	18.8	6.9	7.4	14.0	11.9	22.9	6.0	6.5	7.5	8.2	7.4	6.1	13.4	11.9	1.1	12.2	7.6
5.9	13.1	5.2	6.1	8.9	7.1	5.4	2.8	0.7	1.1	1.8	1.7	3.4	2.9	5.4	2.1	4.0	2.8
7.5	3.3	4.4	5.4	6.2	6.1	2.6	2.3	1.2	1.2	4.5	3.1	3.9	1.5	9.4	2.1	5.2	3.8
7.5	5.9	6.7	8.6	6.2	7.2	5.1	9.7	9.4	8.1	8.3	8.7	6.2	3.5	6.7	1.1	4.9	7.0
17.8	10.6	11.2	11.5	13.6	14.8	11.6	10.7	10.0	10.7	14.0	12.2	14.9	13.9	10.5	74.5	14.8	13.7
20.6	4.3	11.1	6.6	8.3	14.3	25.0	5.7	4.6	4.2	4.0	4.5	2.8	2.6	3.1	3.2	2.8	3.4
7.3	2.3	6.5	3.6	4.8	5.9	8.9	3.5	2.0	3.3	2.6	2.7	1.9	1.4	2.7	0.0	1.9	2.2
36.2	61.4	44.0	48.7	51.4	43.6	37.0	44.9	47.1	47.5	48.0	47.2	59.2	68.8	58.6	17.0	62.0	55.1
18.0	21.3	27.2	29.6	21.9	21.4	17.4	35.1	36.2	34.3	31.3	33.3	21.3	13.4	25.1	5.3	18.5	25.5
1,332	613	429	370	341	3,085	10,473	444	507	305	1,341	2,597	3,881	801	641	16	1,458	7,936
19.6	48.6	26.8	24.3	34.3	28.6	49.0	7.2	4.3	4.9	8.5	7.0	5.3	30.8	12.3	25.0	22.6	9.0
19.3	30.5	55.7	55.4	34.3	32.6	23.7	75.5	80.3	83.0	70.8	74.9	40.2	51.9	51.8	43.8	51.8	53.7
5.8	4.2	4.7	5.7	11.1	5.9	3.9	5.6	6.5	2.6	5.3	5.3	39.2	5.6	13.9	6.3	9.3	22.6
50.8	10.1	7.9	7.6	14.1	27.5	16.5	6.8	3.6	4.3	9.3	7.2	11.2	7.9	17.8	18.8	12.3	10.1
1.3	4.1	2.3	4.6	2.6	2.5	2.3	2.0	1.2	2.6	2.1	2.0	1.0	1.7	1.7	6.3	1.8	1.5
28.2	36.5	52.2	51.9	37.2	37.1	30.2	61.3	55.4	65.2	46.8	53.1	26.2	50.2	44.5	43.8	47.6	38.9
20.1	24.8	19.3	20.0	17.9	20.7	16.0	10.4	8.5	8.9	13.0	11.2	22.7	29.8	19.5	18.8	25.2	19.4
17.3	9.0	11.0	10.3	13.8	13.5	15.9	9.7	12.2	10.2	14.4	12.7	13.5	6.4	12.5	12.5	9.1	12.4
15.8	14.2	6.8	4.6	14.4	12.7	14.5	5.4	7.1	4.9	11.0	8.5	19.2	5.7	13.3	12.5	9.1	13.9
1.4	1.1	1.6	2.2	0.6	1.4	1.4	0.5	1.6	0.3	3.3	2.1	1.1	0.2	1.2	0.0	0.7	1.4
13.9	12.1	6.8	8.6	12.6	11.8	17.6	9.9	11.0	8.2	8.2	9.0	14.4	5.2	6.6	12.5	6.2	11.1
3.3	2.3	2.3	2.4	3.5	2.9	4.5	2.9	4.1	2.3	3.4	3.3	2.9	1.9	2.5	0.0	2.1	2.9
6.1	7.8	9.1	6.2	10.3	7.3	6.7	10.4	7.5	7.9	7.6	8.1	4.3	6.8	5.0	12.5	6.0	5.9
18.8	15.2	13.3	16.2	11.7	16.2	14.3	15.1	17.2	19.0	14.7	15.7	12.6	14.8	14.0	6.3	14.3	13.9
12.5	8.0	14.2	10.3	13.2	11.6	12.1	11.7	16.2	15.7	15.7	15.1	14.9	15.8	13.3	6.3	14.6	14.9
8.9	2.6	5.8	4.3	5.3	6.3	5.9	8.1	7.1	8.9	6.4	7.1	9.1	6.5	7.0	0.0	6.7	8.0
15.7	22.0	11.4	23.2	19.6	17.7	14.8	14.6	12.8	13.4	13.6	13.6	20.3	17.8	17.2	18.8	17.5	17.6
3.5	2.4	3.5	4.3	3.5	3.4	3.2	5.2	7.3	5.6	4.3	5.2	6.5	3.5	5.5	6.3	4.4	5.7
8.7	4.2	5.1	8.4	5.6	6.9	7.9	8.8	8.9	3.9	8.1	7.9	9.6	9.9	10.0	6.3	9.9	9.1
6.4	2.8	7.2	3.5	6.2	5.4	5.4	3.6	4.7	3.0	5.7	4.8	6.1	3.4	4.2	6.3	3.8	5.3
15.3	7.8	14.9	10.5	10.3	12.6	16.5	13.3	12.2	10.5	11.6	11.9	9.6	9.5	11.7	12.5	10.5	10.5
0.6	1.0	1.2	1.1	0.6	0.8	0.8	0.7	1.4	0.0	1.1	1.0	0.8	0.5	1.1	0.0	0.8	0.8
3.1	25.8	14.2	10.8	12.9	11.2	11.7	7.9	4.3	11.1	10.7	9.0	5.1	11.0	10.6	25.0	11.0	7.5
0.5	0.3	0.0	1.1	0.9	0.5	0.7	0.7	0.4	1.0	0.5	0.6	1.0	0.8	0.5	0.0	0.6	0.8

*Includes 174 respondents not reporting gender. **Includes 2-year, 4-year, and foreign colleges and universities, medical schools, and elementary/secondary schools.

***Includes 20 respondents whose doctoral field was unknown. +Includes only recipients with definite employment plans.

APPENDIX TABLE A-3b Statistical Profile of Doctorate Recipients by Major Field, 1998

Total Men

	1998 Total	Physics and Astronomy	Chemistry	Earth, Atmos., and Marine Sci.	Mathematics	Computer Sciences	PHYSICAL SCIENCES	ENGINEERING	Biochemistry	Other Biosciences	Health Sciences	Agricultural Sciences	LIFE SCIENCES	
Total Men	24,653	1,354	1,510	605	872	763	5,104	5,108	448	2,850	488	854	4,640	
Men as a Percent of Total Doctorates	%	57.8	85.5	68.1	72.2	74.1	82.7	75.7	86.3	56.1	56.4	32.5	71.6	54.3
U.S. Citizenship	%	59.8	53.2	58.7	59.3	46.2	48.1	53.6	42.5	58.9	62.9	53.7	41.7	57.7
Non-U.S., Permanent Visa		6.7	7.9	7.2	6.8	7.5	8.3	7.5	7.8	10.5	9.3	7.6	7.4	8.9
Non-U.S., Temporary Visa		26.0	31.9	27.7	26.8	39.4	37.9	32.2	41.9	23.2	22.2	26.8	43.2	26.7
Unknown		7.4	7.0	6.3	7.1	6.9	5.8	6.6	7.9	7.4	5.6	11.9	7.7	6.8
Never Married	%	27.1	39.8	32.6	26.1	38.8	30.0	34.4	31.3	29.9	28.9	18.9	14.8	25.3
Married		56.4	45.1	53.5	59.2	47.2	57.0	51.4	56.5	55.1	56.1	58.8	73.3	59.5
Separated, Divorced		3.6	2.7	2.5	3.8	2.6	2.9	2.8	2.0	2.0	3.5	3.1	2.9	3.2
Marriage-like Relationship		3.4	3.8	3.5	3.3	3.4	2.5	3.4	2.4	3.3	3.9	3.1	1.3	3.3
Widowed		0.1	0.0	0.0	0.2	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.1	0.0
Unknown		9.3	8.6	7.9	7.4	7.9	7.6	8.0	7.8	9.6	7.5	16.2	7.6	8.7
Median Age at Doct.	Yrs	33.1	30.1	29.7	34.0	30.6	32.9	30.8	31.7	30.5	31.7	35.4	35.2	32.3
Percent with Bacc. in Same Field as Doctorate	%	54.0	70.2	71.3	49.6	65.3	38.0	62.3971	72.2	30.6	52.4	25.6	49.9	47.0
Percent with Masters	%	73.0	65.0	40.3	75.2	72.8	82.2	62.8	83.3	32.6	45.3	70.9	87.4	54.5
Median Time Lapse from Bacc. To Total Time Registered Time	Yrs	9.9	7.6	6.9	11.0	8.0	10.0	8.0	9.0	7.9	8.5	12.0	11.5	9.0
		7.2	6.9	6.0	7.6	6.6	7.5	6.7	6.7	6.8	7.0	7.5	7.0	7.0
Postdoctoral Study Plans	%	25.9	48.4	49.0	41.2	26.6	13.2	38.8	18.7	69.6	65.2	19.3	30.7	54.4
Fellowship		12.5	17.5	21.5	16.7	14.0	3.8	15.9	5.9	43.3	38.6	9.4	10.1	30.7
Research Assoc.		11.5	30.0	26.4	23.5	11.2	8.3	21.7	11.4	20.5	20.9	8.2	18.4	19.1
Traineeship		0.8	0.4	0.5	1.0	0.6	0.8	0.6	0.9	0.7	1.2	1.0	1.4	1.2
Other Study		1.1	0.5	0.7	0.0	0.8	0.4	0.5	0.5	5.1	4.6	0.6	0.8	3.5
Planned Employment														
After Doctorate	%	62.5	41.7	40.9	48.9	62.8	78.4	51.4	70.8	19.9	26.2	62.7	58.2	35.3
Educ. Institution*		27.7	6.6	6.7	15.2	31.1	23.1	14.3	10.3	4.5	8.5	28.3	20.7	12.4
Industry/Business		22.5	27.5	30.0	22.0	22.9	46.5	29.6	49.2	10.5	8.5	16.0	17.3	11.1
Government		5.2	3.4	1.7	6.0	3.0	4.3	3.3	7.3	0.9	3.0	10.7	11.8	5.2
Nonprofit		2.4	0.4	0.3	0.7	1.0	1.4	0.7	1.4	0.4	0.8	3.1	3.0	1.4
Other & Unknown		4.7	3.8	2.3	5.1	4.8	3.0	3.6	2.7	3.6	5.4	4.7	5.3	5.1
Postdoc. Plans Unknown	%	11.7	9.8	10.1	9.9	10.6	8.4	9.8	10.5	10.5	8.6	18.0	11.1	10.3
Definite Postdoc. Study	%	18.9	39.0	39.3	29.6	19.0	9.4	30.2	12.2	56.5	50.1	14.3	17.9	41.0
Seeking Postdoc. Study		7.0	9.5	9.7	11.6	7.6	3.8	8.6	6.5	13.2	15.1	4.9	12.8	13.4
Definite Employment		43.2	27.1	28.5	32.2	40.9	56.6	34.9	50.3	13.6	17.4	48.2	38.6	24.2
Seeking Employment		19.3	14.6	12.4	16.7	21.9	21.8	16.5	20.5	6.3	8.7	14.5	19.6	11.1
Employment Commitments After Doctorate	10,644	367	431	195	357	432	1,782	2,569	61	497	235	330	1,123	
Primary Activity*														
R & D	%	40.6	62.9	74.2	51.8	40.9	65.7	60.7	72.8	42.6	39.0	43.8	53.3	44.4
Teaching		31.2	12.3	13.7	20.0	40.9	21.5	21.4	9.1	11.5	19.3	29.8	21.2	21.6
Administration		9.6	1.6	1.4	2.1	0.8	2.5	1.7	2.3	3.3	4.0	7.7	4.2	4.8
Prof. Services		12.6	15.0	5.3	17.4	9.0	7.2	9.8	11.3	21.3	17.1	10.2	15.2	15.3
Other		2.1	3.0	1.4	4.6	2.0	1.4	2.2	2.0	1.6	1.8	3.0	3.0	2.4
Secondary Activity														
R & D	%	31.9	25.6	19.3	31.8	41.7	27.3	28.4	21.1	24.6	26.2	35.3	31.5	29.6
Teaching		17.9	6.3	7.2	15.9	17.1	16.7	12.2	13.9	11.5	16.7	20.4	22.4	18.9
Administration		15.7	17.4	31.3	12.8	6.2	12.7	16.9	19.9	19.7	15.5	18.7	15.2	16.3
Prof. Services		14.0	18.0	14.8	19.0	13.2	12.0	14.9	17.0	9.8	10.5	13.2	15.5	12.5
Other		1.3	0.5	0.7	3.1	0.8	0.9	1.0	1.8	1.6	0.8	1.3	0.9	1.0
No Secondary Activity		15.5	27.0	23.2	13.8	14.8	28.7	22.6	23.7	14.8	12.1	5.5	11.5	10.7
Activity(ies) Unknown	%	3.7	5.2	3.5	3.6	6.2	1.6	3.9	2.5	18.0	18.3	5.5	3.0	11.1
Region of Employment														
After Doctorate+														
New England	%	6.3	6.8	10.4	3.1	5.3	7.9	7.2	6.2	4.9	7.2	7.7	2.7	5.9
Middle Atlantic		13.5	15.0	20.9	7.2	13.7	19.0	16.3	12.0	23.0	14.5	8.9	5.8	11.2
East No. Central		12.8	12.3	15.5	5.6	16.9	7.6	12.1	12.1	18.0	10.7	11.9	9.1	10.9
West No. Central		6.4	4.6	7.0	2.6	8.1	4.4	5.6	4.2	4.9	5.6	8.5	9.7	7.4
South Atlantic		14.8	13.1	11.1	16.4	16.0	14.6	13.9	11.6	13.1	16.1	16.6	7.9	13.6
East So. Central		3.9	2.5	2.8	0.5	5.3	1.6	2.7	2.5	1.6	3.2	4.3	5.5	4.0
West So. Central		8.3	7.7	6.0	23.6	6.7	6.3	8.5	9.4	8.2	5.4	9.4	5.2	6.3
Mountain		5.2	6.3	3.5	10.8	4.8	3.5	5.1	5.5	8.2	5.8	4.7	6.7	6.0
Pacific & Insular		15.1	24.6	13.9	17.9	9.8	25.7	18.6	22.8	8.2	16.1	9.8	9.1	12.3
U.S., Region Unknown		0.7	0.3	0.7	0.5	0.6	0.9	0.6	0.6	1.6	2.0	0.9	1.2	1.5
Foreign		12.3	6.3	6.7	11.3	12.1	7.9	8.5	12.4	8.2	12.3	16.6	36.4	20.0
Region Unknown		0.7	0.5	1.4	0.5	0.6	0.7	0.8	0.7	0.0	1.0	0.9	0.9	0.9

APPENDIX TABLE A-3b Statistical Profile of Doctorate Recipients by Major Field, 1998

Total Men

Psychology	Economics	Anthropology and Sociology	Political Sci./International Rel.	Other Social Sciences	SOCIAL SCI. INCL. PSYCH.	TOTAL SCIENCES & ENGINEERING	History	Eng. and Amer. Lang. And Lit.	Foreign Lang. and Lit.	Other Humanities	HUMANITIES	EDUCATION	Business and Management	Other Professional Fields	Other Fields/Unknown	PROFESSIONAL/ OTHER FIELDS	TOTAL NONSCIENCES
1,205	724	426	482	369	3,206	18,058	603	455	267	1,489	2,814	2,422	783	524	52	1,359	6,582
32.7	72.5	43.7	63.5	55.7	45.3	63.9	61.0	42.3	41.6	53.3	51.2	36.9	67.2	47.9	55.3	57.8	45.7
84.4	39.8	70.9	73.4	59.9	68.1	54.1	82.1	87.0	64.4	73.9	76.9	81.4	60.2	70.6	17.3	62.5	75.7
2.7	7.6	5.4	4.8	7.6	5.0	7.5	4.6	2.2	10.9	6.0	5.5	2.9	7.0	5.0	3.8	6.1	4.7
5.1	43.9	16.4	13.5	22.5	18.7	31.1	6.3	7.3	16.5	11.2	10.0	8.6	26.1	18.3	13.5	22.6	12.1
7.8	8.7	7.3	8.3	10.0	8.3	7.3	7.0	3.5	8.2	8.9	7.5	7.1	6.8	6.1	65.4	8.8	7.5
25.5	31.1	23.0	24.3	19.5	25.5	29.6	23.4	29.7	31.8	26.5	26.8	12.9	19.7	20.6	3.8	19.4	20.2
48.0	54.0	58.9	55.6	63.7	53.7	55.3	60.2	49.0	45.7	52.8	53.1	66.2	61.3	62.6	9.6	59.8	59.4
5.6	3.3	6.8	5.2	4.9	5.1	3.1	3.3	4.8	6.4	4.2	4.3	6.2	5.1	5.0	1.9	4.9	5.2
6.3	3.7	4.2	4.1	3.5	4.8	3.3	4.8	8.8	7.1	4.6	5.6	2.3	2.0	2.5	0.0	2.1	3.7
0.0	0.3	0.0	0.0	0.0	0.1	0.0	0.2	0.4	0.0	0.3	0.2	0.4	0.0	0.4	0.0	0.1	0.3
14.6	7.6	7.0	10.8	8.4	10.7	8.6	8.1	7.3	9.0	11.6	9.9	12.0	11.9	9.0	84.6	13.5	11.3
33.1	32.2	35.2	33.5	35.8	33.5	32.0	34.7	33.8	34.5	35.6	34.9	43.3	35.9	38.6	34.8	37.0	37.8
57.6	54.6	76.8	55.6	23.0	55.2	59.9	51.6	66.4	0.0	50.5	48.5	29.9	32.2	27.3	5.8	29.3	37.8
74.8	72.9	87.3	77.8	87.5	77.9	69.2	83.1	82.6	80.5	80.7	81.5	87.2	80.2	87.8	21.2	80.9	83.6
9.3	9.3	11.0	10.1	12.0	10.0	8.9	11.2	10.9	10.1	12.0	11.3	18.9	12.3	15.0	9.1	13.1	13.8
7.3	7.0	8.9	8.0	8.1	7.6	7.0	8.3	8.0	8.0	8.6	8.3	8.4	7.6	8.5	8.2	7.9	8.3
25.9	7.3	20.0	11.0	13.0	17.2	33.3	8.8	7.9	8.2	5.8	7.0	4.6	3.7	5.5	1.9	4.3	5.6
18.3	2.9	12.7	6.8	6.8	11.0	16.0	5.5	5.5	4.1	3.3	4.2	1.7	1.3	2.1	1.9	1.6	2.7
5.4	3.3	5.4	2.9	4.9	4.5	15.0	2.2	0.4	1.9	1.2	1.4	1.7	1.9	2.3	0.0	2.0	1.6
1.9	0.6	0.9	0.2	1.1	1.1	0.9	0.3	0.2	1.5	0.3	0.4	0.7	0.4	0.8	0.0	0.5	0.5
0.2	0.6	0.9	1.0	0.3	0.5	1.3	0.8	1.8	0.7	1.0	1.1	0.5	0.1	0.4	0.0	0.2	0.7
58.3	82.3	69.5	75.5	72.9	69.5	56.0	79.9	82.4	81.3	79.9	80.5	80.3	82.6	82.1	11.5	79.7	80.4
23.8	40.7	45.8	49.4	38.2	36.1	16.5	58.0	64.6	61.4	56.7	58.7	60.9	60.2	46.6	9.6	53.0	58.4
13.8	19.2	8.5	7.1	14.6	13.4	27.5	7.0	6.6	8.6	8.3	7.7	6.9	14.9	11.8	1.9	13.2	8.6
7.1	14.0	5.6	8.1	11.1	9.0	5.9	3.3	0.4	1.9	1.6	1.8	3.9	3.1	7.1	0.0	4.5	3.1
8.0	3.0	2.6	4.4	4.3	5.2	1.9	3.0	0.9	1.5	5.1	3.6	3.9	1.3	11.5	0.0	5.2	4.0
5.6	5.4	7.0	6.6	4.6	5.8	4.1	8.6	9.9	7.9	8.2	8.5	4.8	3.2	5.2	0.0	3.8	6.2
15.9	10.4	10.6	13.5	14.1	13.3	10.8	11.3	9.7	10.5	14.3	12.5	15.0	13.7	12.4	86.5	16.0	14.0
18.9	4.8	12.7	7.1	7.3	11.8	24.6	5.3	5.3	4.9	3.0	4.1	2.8	2.4	2.7	1.9	2.5	3.3
7.0	2.5	7.3	3.9	5.7	5.4	8.7	3.5	2.6	3.4	2.8	2.9	1.9	1.3	2.9	0.0	1.8	2.3
41.6	59.9	38.5	45.9	52.3	47.2	38.7	41.8	46.2	46.8	49.4	47.0	61.0	69.9	58.2	9.6	63.1	55.6
16.7	22.4	31.0	29.7	20.6	22.3	17.3	38.1	36.3	34.5	30.5	33.4	19.4	12.8	23.9	1.9	16.6	24.9
501	434	164	221	193	1,513	6,987	252	210	125	736	1,323	1,477	547	305	5	857	3,657
22.4	50.2	28.0	25.8	32.1	32.7	56.5	7.9	2.4	3.2	8.3	6.8	5.1	32.5	10.2	20.0	24.5	10.3
20.0	28.3	51.8	52.5	37.8	32.8	19.4	72.2	82.4	82.4	70.1	73.6	37.2	49.7	53.1	60.0	51.0	53.6
4.8	5.1	4.9	5.9	8.3	5.5	3.2	6.7	5.7	2.4	5.7	5.6	44.3	5.5	13.8	0.0	8.4	21.9
48.3	9.0	9.8	8.1	15.0	22.7	14.0	9.9	4.3	6.4	10.6	9.1	9.4	8.0	19.7	20.0	12.3	10.0
1.6	4.4	3.0	5.0	3.6	3.3	2.4	2.0	1.0	4.0	1.9	2.0	0.9	2.0	2.0	0.0	2.0	1.5
29.3	33.6	51.8	48.0	42.5	37.4	27.9	59.5	54.8	67.2	44.4	51.1	25.9	48.3	41.3	80.0	46.0	39.7
23.2	27.2	24.4	22.2	18.7	23.7	16.4	10.3	7.1	7.2	13.3	11.2	26.3	30.0	19.3	20.0	26.1	20.8
16.8	10.6	8.5	10.0	14.5	12.8	17.0	10.3	16.2	8.8	16.6	14.6	13.8	6.6	16.1	0.0	9.9	13.2
16.4	13.6	5.5	5.0	10.4	12.0	14.7	7.5	5.2	5.6	11.4	9.1	17.7	6.2	14.4	0.0	9.1	12.6
1.0	0.9	2.4	1.8	0.5	1.2	1.3	0.8	1.4	0.0	3.0	2.0	0.9	0.0	1.0	0.0	0.4	1.2
10.4	11.3	5.5	10.4	10.4	10.1	18.4	10.3	11.0	9.6	8.6	9.4	12.6	6.9	6.6	0.0	6.8	10.1
3.0	2.8	1.8	2.7	3.1	2.8	4.3	1.2	4.3	1.6	2.7	2.6	2.8	2.0	1.3	0.0	1.8	2.5
5.8	7.1	5.5	5.4	8.3	6.4	6.4	9.1	10.0	6.4	8.0	8.4	4.3	5.5	4.6	20.0	5.3	6.0
16.4	14.1	9.8	14.9	9.3	13.9	13.4	15.5	17.6	18.4	13.2	14.8	12.9	14.8	11.5	0.0	13.5	13.7
12.6	8.5	16.5	10.4	11.9	11.4	11.8	10.7	16.7	12.8	15.6	14.6	15.2	15.5	12.5	0.0	14.4	14.8
10.4	3.5	5.5	1.8	5.7	6.0	5.5	9.1	6.7	8.8	6.9	7.5	10.1	6.9	5.2	0.0	6.3	8.3
16.4	20.7	11.6	21.3	21.2	18.4	14.0	16.7	13.3	18.4	13.0	14.3	17.5	16.6	18.0	20.0	17.2	16.2
3.6	2.1	3.0	4.1	3.6	3.2	3.0	4.8	7.1	4.8	4.8	5.1	6.8	3.5	5.9	0.0	4.3	5.6
9.6	4.1	5.5	7.7	5.7	6.8	8.1	8.7	8.1	4.8	9.0	8.4	8.2	9.5	10.8	20.0	10.0	8.7
6.0	3.2	7.3	4.1	5.7	5.0	5.4	1.6	3.3	4.8	5.4	4.3	6.1	2.7	3.9	0.0	3.2	4.8
15.0	6.7	15.2	12.7	8.8	11.5	17.6	11.9	10.0	11.2	11.4	11.3	9.6	10.1	10.5	0.0	10.2	10.3
0.2	0.7	1.2	1.4	1.0	0.7	0.8	0.8	1.0	0.0	1.2	1.0	0.5	0.5	0.7	0.0	0.6	0.7
4.0	28.8	18.9	14.9	17.1	16.0	13.4	10.3	6.2	8.0	11.0	9.8	8.0	13.5	16.4	40.0	14.7	10.2
0.2	0.5	0.0	1.4	1.6	0.6	0.7	0.8	0.0	1.6	0.4	0.5	0.8	0.7	0.0	0.0	0.5	0.6

NOTE: Field groupings may differ from those in reports published by federal sponsors of the Survey of Earned Doctorates. Physical Sciences includes Mathematics and Computer Sciences, as well as Physics/Astronomy, Chemistry, and Earth/Atmospheric/Marine Sciences.

*Includes 2-year, 4-year, and foreign colleges and universities, medical schools, and elementary/secondary schools.

+Includes only recipients with definite employment plans

APPENDIX TABLE A-3c Statistical Profile of Doctorate Recipients by Major Field, 1998

Total Women

	1998 Total	Physics and Astronomy	Chemistry	Earth, Atmos., and Marine Sci.	Mathematics	Computer Sciences	PHYSICAL SCIENCES	ENGINEERING	Biochemistry	Other Biosciences	Health Sciences	Agricultural Sciences	LIFE SCIENCES	
Total Women	17,856	223	695	228	297	157	1,600	769	349	2,184	1,006	337	3,876	
Women as a Percent of Total Doctorates	%	41.8	14.1	31.3	27.2	25.2	17.0	23.7	13.0	43.7	43.2	67.1	28.3	45.4
U.S. Citizenship	%	75.3	50.2	55.8	67.1	57.2	63.7	57.7	48.1	56.4	67.4	76.8	50.7	67.4
Non-U.S., Permanent Visa		5.7	9.9	10.1	10.1	9.1	12.7	10.1	10.0	13.2	8.9	4.4	10.4	8.2
Non-U.S., Temporary Visa		12.4	30.0	27.3	18.0	25.3	12.7	24.6	32.2	26.1	18.4	10.6	32.0	18.2
Unknown		6.6	9.9	6.8	4.8	8.4	10.8	7.6	9.6	4.3	5.4	8.2	6.8	6.1
Never Married	%	25.4	34.5	35.7	31.1	30.3	14.0	31.8	33.3	27.8	32.4	20.4	30.9	28.7
Married		50.2	44.4	48.6	50.4	51.9	51.6	49.2	48.0	58.7	50.4	55.7	50.7	52.6
Separated, Divorced		9.1	3.6	2.6	6.1	3.4	11.5	4.3	4.2	3.4	4.8	10.0	7.4	6.2
Marriage-like Relationship		4.4	4.9	4.7	6.1	4.4	3.8	4.8	4.6	5.2	5.1	2.6	3.0	4.3
Widowed		0.5	0.0	0.0	0.0	0.7	0.0	0.1	0.3	0.0	0.1	0.6	0.0	0.2
Unknown		10.4	12.6	8.3	6.1	9.4	19.1	9.9	9.8	4.9	7.1	10.7	8.0	7.9
Median Age at Doct.	Yrs	34.7	29.9	29.3	32.2	30.8	34.8	30.3	30.4	30.3	30.8	40.8	33.2	32.2
Percent with Bacc. in Same Field as Doctorate	%	49.2	69.1	72.4	46.5	68.7	28.7	63.3	66.1	25.5	56.4	52.7	41.8	51.4
Percent with Masters	%	74.8	69.5	36.3	73.2	70.7	79.0	56.8	79.1	34.4	39.9	83.0	82.2	54.3
Median Time Lapse from Bacc. To Total Time Registered Time	Yrs	11.3 7.6	7.5 6.8	6.6 6.0	9.3 7.4	8.3 6.9	12.4 8.5	7.7 6.5	8.0 6.5	8.0 6.9	8.2 6.7	16.3 8.2	10.5 7.0	9.4 7.0
Postdoctoral Study Plans	%	22.5 13.6 6.9 0.8 1.1	42.2 14.8 26.0 0.9 0.4	44.6 20.4 22.9 0.6 0.7	39.9 20.6 18.9 0.0 0.4	20.2 11.4 6.7 1.7 0.3	9.6 3.2 5.7 0.6 0.0	35.6 16.3 18.1 0.8 0.5	20.5 6.6 12.7 1.4 0.9	71.9 44.7 21.2 1.4 4.6	66.1 43.4 18.3 1.2 3.2	15.1 10.2 3.6 0.6 0.7	34.4 32.1 23.4 0.0 2.4	50.6 15.2 1.0 0.0 2.4
Planned Employment														
After Doctorate	%	64.9 38.9 11.4 3.7 3.9 7.1	43.9 9.9 22.0 3.6 0.9 7.6	45.8 9.1 31.1 2.2 0.4 3.0	51.8 17.5 18.4 5.7 3.1 7.0	67.7 38.0 22.2 2.7 1.0 12.1	73.2 35.7 29.9 4.5 5.3 3.7	53.1 18.4 26.3 3.2 18.1 4.4	68.1 14.0 42.4 5.6 12.7 5.3	20.9 5.2 7.7 0.9 21.2 4.6	25.7 9.7 6.9 2.1 18.3 3.2	71.9 39.8 9.8 6.6 8.2 5.8	54.6 19.3 19.9 8.0 3.0 5.6	39.8 17.9 8.9 3.7 3.0 6.3
Postdoc. Plans Unknown	%	12.7	13.9	9.6	8.3	12.1	17.2	11.3	11.3	7.2	8.2	13.0	11.0	9.6
Definite Postdoc. Study	%	16.3	33.6	35.4	29.4	13.5	7.6	27.5	13.1	53.3	49.6	10.5	22.6	37.5
Seeking Postdoc. Study		6.2	8.5	9.2	10.5	6.7	1.9	8.1	7.4	18.6	16.4	4.6	11.9	13.2
Definite Employment		43.4	22.4	29.4	32.5	46.1	52.2	34.2	46.3	9.7	15.5	52.0	31.5	25.9
Seeking Employment		21.5	21.5	16.4	19.3	21.5	21.0	18.9	21.8	11.2	10.2	19.9	23.1	13.9
Employment Commitments After Doctorate	7,749	50	204	74	137	82	547	356	34	339	523	106	1,002	
Primary Activity+														
R & D	%	19.6	50.0	61.3	36.5	29.9	42.7	46.3	66.6	41.2	33.3	25.4	40.6	30.2
Teaching		44.2	26.0	24.5	35.1	51.8	39.0	35.1	13.5	23.5	30.4	45.5	25.5	37.5
Administration		15.2	2.0	1.0	1.4	0.7	6.1	1.8	1.4	2.9	4.4	9.0	7.5	7.1
Prof. Services		15.3	14.0	7.8	17.6	10.9	8.5	10.6	10.7	11.8	15.0	15.1	15.1	15.0
Other		1.7	4.0	1.5	2.7	2.2	2.4	2.2	4.2	2.9	1.5	0.8	4.7	1.5
Secondary Activity														
R & D	%	36.8	36.0	25.5	40.5	55.5	35.4	37.5	22.8	29.4	29.5	39.2	33.0	34.9
Teaching		16.9	10.0	5.9	6.8	14.6	12.2	9.5	13.8	2.9	13.0	17.0	16.0	15.1
Administration		12.5	10.0	16.2	13.5	5.1	11.0	11.7	14.3	14.7	11.8	13.8	11.3	12.9
Prof. Services		14.6	6.0	15.7	10.8	8.8	13.4	12.1	16.0	14.7	15.6	15.9	13.2	15.5
Other		1.5	2.0	1.0	5.4	0.7	2.4	1.8	1.1	0.0	1.2	1.1	3.8	1.4
No Secondary Activity		13.8	32.0	31.9	16.2	10.9	24.4	23.4	28.7	20.6	13.9	8.8	16.0	11.7
Activity(ies) Unknown	%	3.9	4.0	3.9	6.8	4.4	1.2	4.0	3.4	17.6	15.0	4.2	6.6	8.6
Region of Employment														
After Doctorate+														
New England	%	6.5	6.0	9.3	2.7	5.1	4.9	6.4	7.0	14.7	8.8	5.5	2.8	6.7
Middle Atlantic		15.1	18.0	21.6	14.9	14.6	23.2	18.8	15.7	5.9	14.5	10.3	11.3	11.7
East No. Central		14.0	16.0	14.7	8.1	16.1	12.2	13.9	10.1	11.8	13.6	15.5	12.3	14.4
West No. Central		7.3	0.0	6.4	1.4	9.5	7.3	6.0	5.6	0.0	7.7	7.6	11.3	7.8
South Atlantic		17.7	12.0	18.1	13.5	17.5	15.9	16.5	12.1	23.5	15.6	19.3	7.5	17.0
East So. Central		4.9	2.0	2.0	2.7	2.9	7.3	3.1	2.2	0.0	4.4	5.9	1.9	4.8
West So. Central		8.5	4.0	7.4	14.9	7.3	7.3	8.0	7.3	5.9	5.6	9.0	8.5	7.7
Mountain		5.5	4.0	2.5	13.5	6.6	3.7	5.3	5.6	2.9	4.1	4.2	9.4	4.7
Pacific & Insular		12.4	36.0	9.3	16.2	10.2	14.6	13.7	22.8	20.6	14.7	10.9	12.3	12.7
U.S., Region Unknown		1.0	0.0	0.5	4.1	0.7	1.2	1.1	0.3	2.9	1.5	1.1	0.9	1.3
Foreign		6.5	2.0	7.8	8.1	9.5	2.4	6.9	10.4	11.8	9.1	9.6	21.7	10.8
Region Unknown		0.7	0.0	0.5	0.0	0.0	0.0	0.2	0.8	0.0	0.3	1.0	0.0	0.6

APPENDIX TABLE A-3c Statistical Profile of Doctorate Recipients by Major Field, 1998

Total Women

Psychology	Economics	Anthropology and Sociology	Political Sci./International Rel.	Other Social Sciences	SOCIAL SCI. INCL. PSYCH.	TOTAL SCIENCES & ENGINEERING	History	Eng. and Amer. Lang. And Lit.	Foreign Lang. and Lit.	Other Humanities	HUMANITIES	EDUCATION	Business and Management	Other Professional Fields	Other Field/Unknown	PROFESSIONAL/ OTHER FIELDS	TOTAL NONSCIENCES
2,460	271	543	276	288	3,838	10,083	385	621	373	1,296	2,675	4,120	374	567	32	973	7,768
66.8	27.2	55.7	36.4	43.4	54.2	35.7	39.0	57.7	58.1	46.4	48.6	62.8	32.1	51.9	39.4	41.6	54.0
87.2	44.6	79.2	81.2	70.8	81.4	69.7	87.0	88.6	62.2	74.0	77.6	86.3	78.3	85.5	46.9	81.5	82.7
2.4	9.2	4.2	5.1	5.6	3.6	6.9	3.4	2.4	16.4	6.9	6.7	2.4	5.6	3.9	3.1	4.5	4.1
3.6	34.7	10.3	8.0	18.1	8.2	16.5	5.7	3.7	12.9	12.5	9.5	5.2	11.5	6.3	9.4	8.4	7.1
6.8	11.4	6.3	5.8	5.6	6.9	6.9	3.9	5.3	8.6	6.6	6.2	4.5	4.2	40.6	5.5	6.1	
27.6	36.5	25.8	27.9	31.3	28.2	29.4	24.9	25.9	22.5	30.2	27.4	15.0	21.1	25.0	9.4	23.0	20.2
43.1	44.3	47.7	50.0	45.8	44.5	48.6	50.4	46.7	51.2	45.5	47.3	55.9	50.5	51.5	28.1	50.4	52.3
7.7	5.2	11.4	8.7	8.0	8.2	6.5	14.3	11.4	11.8	8.9	10.7	13.6	12.6	12.9	3.1	12.4	12.5
4.9	3.0	6.4	5.4	5.2	5.1	4.7	4.9	7.7	6.2	5.7	6.1	2.8	5.1	3.7	6.3	4.3	4.1
0.3	0.7	0.2	0.4	1.7	0.4	0.3	0.5	0.3	0.8	0.2	0.3	1.1	0.3	1.2	0.0	0.8	
16.4	10.3	8.5	7.6	8.0	13.6	10.5	4.9	7.9	7.5	9.5	8.2	11.6	10.4	5.6	53.1	9.0	10.1
32.2	30.9	34.8	32.3	36.7	32.7	31.9	35.3	34.9	34.7	35.5	35.2	44.8	36.5	39.9	40.9	39.0	40.6
59.3	60.9	72.0	47.8	19.1	57.3	56.6	51.9	62.5	0.0	48.1	45.3	38.1	35.0	28.6	15.6	30.6	39.6
75.2	69.0	85.8	79.3	87.8	77.5	65.4	84.4	84.5	85.8	85.4	85.1	88.3	79.7	94.0	46.9	86.9	87.0
9.0	8.5	11.0	9.9	12.7	9.6	9.0	11.9	11.3	11.4	12.2	11.9	20.6	13.0	15.8	15.7	14.6	16.0
7.0	7.0	8.6	7.8	8.0	7.4	7.0	9.0	8.6	8.5	9.0	9.0	8.4	7.9	8.0	6.8	8.0	8.6
29.1	4.8	15.7	8.7	13.5	22.9	35.4	9.9	5.6	7.0	7.8	7.5	4.7	4.5	6.0	6.3	5.4	5.7
22.2	2.6	9.9	7.2	8.3	17.0	21.9	7.3	4.5	2.9	4.8	4.8	1.9	1.3	1.9	6.3	1.8	2.9
4.1	1.5	4.8	1.1	4.2	3.8	11.1	0.5	0.2	2.1	1.6	1.2	1.5	2.1	2.5	0.0	2.3	1.5
2.0	0.4	0.4	0.4	0.7	1.5	1.1	0.5	0.2	0.5	0.5	0.4	0.5	0.3	0.5	0.0	0.4	0.5
0.8	0.4	0.6	0.0	0.3	0.7	1.3	1.6	0.8	1.3	0.8	1.0	0.7	0.8	1.1	0.0	0.9	0.8
52.6	84.1	73.1	83.7	75.0	61.6	52.4	80.3	84.1	82.3	79.2	80.9	80.8	82.4	85.5	46.9	83.0	81.1
20.2	43.9	50.3	54.0	38.2	29.9	22.3	61.0	66.2	65.7	56.8	60.8	61.1	63.4	54.0	31.3	56.8	60.5
11.2	18.1	5.7	8.0	13.5	10.8	14.9	4.4	6.4	6.7	8.2	7.0	5.6	10.2	12.0	0.0	10.9	6.8
5.4	11.1	5.0	2.5	6.3	5.6	4.5	2.1	1.0	0.5	1.9	1.5	3.1	2.7	3.9	6.3	3.5	2.6
7.4	4.1	5.9	7.2	8.7	7.0	4.0	1.3	1.4	1.1	3.8	2.5	4.0	1.9	7.6	6.3	5.3	3.6
8.5	7.0	6.3	12.0	8.3	8.3	6.7	11.4	9.0	8.3	8.5	9.0	7.0	4.3	8.1	3.1	6.5	7.6
18.3	11.1	11.2	7.6	11.5	15.5	12.2	9.9	10.3	10.7	13.0	11.6	14.5	13.1	8.5	46.9	11.5	13.1
21.6	3.0	9.9	5.8	9.7	16.6	26.1	6.2	4.2	3.8	5.2	4.9	2.8	2.9	3.5	6.3	3.4	3.6
7.6	1.8	5.7	2.9	3.8	6.3	9.3	3.6	1.4	3.2	2.5	2.5	1.9	1.6	2.5	0.0	2.1	2.1
33.8	65.7	48.8	54.0	51.0	40.9	34.5	49.9	47.8	48.0	46.7	47.6	58.3	67.4	59.3	34.4	61.6	55.0
18.8	18.5	24.3	29.7	24.0	20.7	17.9	30.4	36.2	34.3	32.5	33.3	22.5	15.0	26.3	12.5	21.5	26.1
831	178	265	149	147	1,570	3,475	192	297	179	605	1,273	2,402	252	336	11	599	4,274
17.9	44.4	26.0	22.1	36.7	24.5	33.9	6.3	5.7	6.1	8.8	7.3	5.4	27.0	14.3	27.3	19.9	8.0
18.9	36.0	58.1	59.7	29.9	32.4	32.3	79.7	78.8	83.2	71.7	76.2	42.1	57.1	50.6	36.4	53.1	53.8
6.4	2.2	4.5	5.4	15.0	6.3	5.3	4.2	7.1	2.8	4.8	4.9	36.1	6.0	14.0	9.1	10.5	23.3
52.2	12.9	6.8	6.7	12.9	32.1	21.6	2.6	3.0	2.8	7.8	5.2	12.3	7.1	16.1	18.2	12.4	10.2
1.1	3.4	1.9	4.0	1.4	1.8	2.0	2.1	1.3	1.7	2.3	2.0	1.1	1.2	1.5	9.1	1.5	1.4
27.6	43.8	52.5	57.7	30.6	36.8	34.9	63.5	55.9	64.2	49.8	55.3	26.4	54.4	47.3	27.3	49.9	38.3
18.3	19.1	16.2	16.8	17.0	17.8	15.3	10.4	9.4	10.1	12.6	11.2	20.5	29.8	19.6	18.2	23.9	18.2
17.7	5.1	12.5	10.7	12.2	14.2	13.4	8.9	9.4	10.6	11.7	10.6	13.3	6.0	9.2	18.2	8.0	11.8
15.4	15.7	7.5	4.0	19.7	13.4	14.1	2.6	8.4	4.5	10.4	7.9	20.1	4.4	12.2	18.2	9.0	15.0
1.6	1.7	1.1	2.7	0.7	1.5	1.5	0.0	1.7	0.6	3.6	2.2	1.3	0.8	1.5	0.0	1.2	1.5
16.0	13.5	7.5	6.0	15.6	13.3	16.0	9.4	11.1	7.3	7.8	8.7	15.5	3.2	6.5	18.2	5.3	12.1
3.5	1.1	2.6	2.0	4.1	3.0	4.8	5.2	4.0	2.8	4.1	4.1	2.9	1.6	3.6	0.0	2.7	3.2
6.3	9.6	11.3	7.4	12.9	8.2	7.4	12.0	5.7	8.9	7.1	7.8	4.3	9.6	5.4	9.1	7.2	5.7
20.2	18.0	15.5	18.1	15.0	18.5	16.3	14.6	16.8	19.0	16.5	16.7	12.4	14.3	16.4	9.1	15.4	14.1
12.4	6.7	12.8	10.1	15.0	11.8	12.7	13.0	15.8	17.9	15.7	15.6	14.7	16.3	14.0	9.1	14.9	15.0
8.1	0.6	6.0	8.1	4.8	6.6	6.7	6.8	7.4	8.9	5.8	6.8	8.5	5.6	8.6	0.0	7.2	7.8
15.3	25.3	11.3	26.2	17.7	17.0	16.4	12.0	12.5	10.1	14.4	13.0	22.0	20.3	16.4	18.2	18.1	18.8
3.5	3.4	3.8	4.7	3.4	3.6	3.7	5.7	7.4	6.1	3.8	5.3	6.4	3.6	5.1	9.1	4.5	5.8
8.2	4.5	4.9	9.4	5.4	7.1	7.4	8.9	9.4	3.4	6.9	7.3	10.4	10.8	9.2	0.0	9.7	9.4
6.6	1.7	7.2	2.7	6.8	5.8	5.4	6.3	5.7	1.7	6.0	5.3	6.1	4.8	4.5	9.1	4.7	5.7
15.5	10.7	14.7	7.4	12.2	13.8	14.4	15.1	13.8	10.1	11.7	12.5	9.7	8.4	12.8	18.2	11.0	10.7
0.8	1.7	1.1	0.7	0.0	0.9	1.0	0.5	1.7	0.0	1.0	0.9	1.0	0.4	1.5	0.0	1.0	1.0
2.5	18.0	11.3	4.7	6.8	6.4	8.1	4.7	3.0	13.4	10.4	8.2	3.4	5.6	5.4	18.2	5.7	5.1
0.6	0.0	0.0	0.7	0.0	0.4	0.5	0.7	0.6	0.7	0.6	1.1	0.4	0.9	0.0	0.7	0.9	0.9

NOTE: Field groupings may differ from those in reports published by federal sponsors of the Survey of Earned Doctorates. Physical Sciences includes Mathematics and Computer Sciences, as well as Physics/Astronomy, Chemistry, and Earth/Atmospheric/Marine Sciences..

*Includes 2-year, 4-year, and foreign colleges and universities, medical schools, and elementary/secondary schools.

+Includes only recipients with definite employment plans.

APPENDIX TABLE A-4 Statistical Profile of Doctorate Recipients, by Race/Ethnicity and Citizenship, 1998

	Total*	Non-U.S.			Indian	Asian	Non-U.S.			Black	Non-U.S.			
	Total*	U.S.	Perm.	Temp.	Total†	Total*	U.S.	Perm.	Temp.	Total*	U.S.	Perm.	Temp.	
Total Number	42,683	28,218	2,696	8,642	189	8,575	1,168	1,552	5,388	1,903	1,467	119	254	
Male	%	57.8	52.3	61.6	74.3	55.0	70.3	55.1	63.5	75.4	43.1	35.4	73.1	68.5
Female		41.8	47.7	37.8	25.6	45.0	29.5	44.9	36.0	24.5	56.8	64.6	26.1	31.5
Doctoral Field														
Physical Sciences	%	15.8	13.0	20.4	23.6	10.1	21.4	16.3	22.8	22.5	7.4	5.6	9.2	16.1
Engineering		13.9	9.0	17.7	27.7	6.9	28.2	20.9	20.0	32.3	6.0	5.2	6.7	9.4
Life Sciences		20.0	18.7	27.2	22.5	13.2	25.4	24.9	32.8	23.3	15.0	11.1	25.2	30.3
Social Sciences		16.6	18.8	11.1	10.6	22.2	9.8	14.7	8.2	8.8	18.8	18.9	20.2	18.5
Humanities		12.9	15.0	12.5	6.2	11.6	5.1	9.6	6.8	3.7	9.7	10.2	7.6	7.1
Education		15.4	19.6	6.3	4.9	26.5	5.2	8.7	5.0	4.4	37.0	42.2	22.7	16.5
Professional/Other		5.5	5.8	4.7	4.5	9.5	4.8	4.9	4.3	4.9	6.2	6.8	8.4	2.0
Median Age at Doct.	Yrs	33.7	34.3	34.2	32.3	36.1	32.7	30.7	34.2	32.4	38.4	39.2	38.4	37.1
Median Time Lapse From Bacc. to Doct.														
Total Time	Yrs	10.4	10.7	11.4	9.5	11.3	10.0	8.2	12.2	9.9	13.5	14.0	11.5	12.1
Registered Time		7.3	7.5	7.9	7.0	7.5	7.2	7.0	8.0	7.0	7.7	7.9	7.5	7.4
Doctoral Program Support**														
Teaching Assistantships	%	17.8	16.1	22.8	21.4	13.8	19.3	12.9	21.3	19.9	10.0	6.8	20.4	22.9
Res. Assistantships/Traineeships		26.5	20.5	37.7	42.1	15.6	45.9	32.2	47.1	49.0	12.2	8.7	23.3	25.1
Fellowships/Dissertation Grants		16.3	17.4	14.2	13.6	24.0	13.2	26.4	12.6	10.6	30.1	30.8	21.4	29.5
Own Resources		32.2	40.1	20.2	11.3	41.9	15.1	24.2	14.9	13.0	39.3	46.1	27.2	9.7
Foreign Government		2.5	0.1	2.1	9.7	0.6	4.6	0.3	1.7	6.0	1.6	0.0	1.9	10.1
Employer		3.1	4.0	1.7	1.1	3.0	1.1	2.0	1.7	0.8	4.8	5.7	3.9	0.0
Other	%	1.6	1.8	1.3	0.9	1.2	0.8	2.0	0.6	0.6	2.0	1.9	1.9	2.6
Postdoctoral Plans														
Postdoc study plans		24.4	22.0	31.6	36.0	17.5	35.0	33.1	34.7	36.2	18.2	15.1	26.9	31.1
Postdoc employment plans		63.3	70.5	61.4	57.5	72.0	58.2	59.8	59.8	57.7	70.6	74.3	62.2	60.6
Educ. Institution #	%	32.3	39.2	22.8	21.7	40.2	18.6	21.6	17.0	18.3	44.7	48.6	33.6	33.1
Industry/Business		17.7	15.8	27.0	25.9	12.7	29.8	23.5	32.3	31.1	10.0	9.5	17.6	9.8
Government		4.5	4.9	2.8	4.7	5.3	4.1	4.5	2.7	4.3	5.6	5.6	1.7	7.9
Nonprofit		3.0	3.8	2.9	1.4	2.6	1.7	2.8	2.8	1.2	3.8	3.9	2.5	3.9
Other/Unknown		5.7	6.7	5.9	3.9	11.1	4.0	7.4	4.9	2.9	6.6	6.7	6.7	5.9
Postdoc plans unknown	%	12.4	7.5	7.1	6.6	10.6	6.7	7.0	5.5	6.0	11.1	10.6	10.9	8.3
Definite Postdoc. Study	%	17.7	16.9	21.4	24.1	10.1	23.4	23.9	23.3	24.0	10.8	9.4	13.4	15.4
Seeking Postdoc. Study		6.6	5.0	10.1	11.9	7.4	11.7	9.2	11.3	12.2	7.5	5.7	13.4	15.7
Definite Employment		43.1	49.4	36.1	37.0	45.5	36.0	40.8	35.6	35.5	45.9	49.2	31.9	38.2
Seeking Employment		20.1	21.1	25.2	20.5	26.5	22.3	19.0	24.2	22.3	24.8	25.1	30.3	22.4
Employment Location														
After Doctorate+		18,409	13,935	974	3,196	86	3,085	477	552	1,911	873	722	38	97
U.S.	%	89.4	97.1	90.1	59.9	97.7	75.5	93.7	90.9	68.4	88.9	98.2	81.6	33.0
Foreign		9.9	2.2	8.9	39.4	2.3	23.7	4.4	8.2	31.0	10.0	0.8	13.2	66.0
Unknown	%	0.7	0.7	0.9	0.7	0.0	0.8	1.9	0.9	0.5	1.1	1.0	5.3	1.0

NOTE: Field groupings may differ from those in reports published by federal sponsors of the Survey of Earned Doctorates.

*Includes 174 individuals who did not report their gender and 3,127 individuals who did not report their citizenship at time of doctorate.

**In this table a recipient counts once in each source category from which he or she received support. This question and its response categories changed in 1998. Please refer to Appendix C Technical Notes for details. Since students indicate multiple sources of support, the vertical percentages sum to more than 100 percent. (Data on the "primary" source of support for doctorate recipients are presented in the Summary Report.)

#Includes 2-year, 4-year, and foreign colleges and universities, medical schools, and elementary/secondary schools.

+Includes only recipients with definite employment plans.

†Includes Alaskan Native.

APPENDIX TABLE A-4 Statistical Profile of Doctorate Recipients, by Race/Ethnicity and Citizenship, 1998

White				Puerto Rican Total	Mexican American						Other Hispanic						Unknown Race		
Non-U.S.		U.S.	Perm.		Non-U.S.			U.S.	Perm.	Temp.	Non-U.S.			U.S.	Perm.	Temp.	Non-U.S.		
Total*	U.S.	Perm.	Temp.	Total*	U.S.	Perm.	Temp.	Total*	U.S.	Perm.	Temp.	Total*	U.S.	Perm.	Temp.	Total*	U.S.	Perm.	Temp.
26,760	23,338	815	2,239	299	468	406	15	39	1,099	485	106	451	3,390	866	89	271			
54.9	53.0	56.3	73.1	41.8	54.9	51.7	60.0	82.1	61.2	55.9	58.5	69.2	57.9	58.7	66.3	73.8			
45.1	47.0	43.7	26.8	58.2	45.1	48.3	40.0	17.9	38.6	43.9	41.5	30.6	37.7	39.8	24.7	25.8			
14.9	13.5	19.4	28.6	8.4	9.0	8.6	0.0	15.4	11.4	8.7	8.5	15.5	16.5	14.8	21.3	26.6			
10.1	8.7	16.2	21.6	5.7	7.9	6.9	13.3	12.8	14.2	11.3	7.5	19.3	14.0	9.5	19.1	18.5			
18.9	19.1	18.0	17.0	17.7	22.4	18.0	40.0	59.0	23.9	17.7	23.6	31.0	16.6	15.6	16.9	25.5			
18.0	18.6	14.8	12.8	27.1	19.9	21.4	13.3	7.7	21.1	25.8	16.0	16.0	18.0	21.0	9.0	10.0			
15.4	15.7	19.6	11.0	12.7	13.0	13.5	33.3	2.6	15.4	13.2	36.8	12.0	13.7	16.2	21.3	6.6			
17.0	18.6	6.9	4.7	23.7	24.8	28.1	0.0	2.6	10.6	19.0	4.7	3.5	15.2	17.0	5.6	7.4			
5.7	5.9	5.0	4.2	4.7	3.0	3.4	0.0	0.0	3.5	4.3	2.8	2.7	6.0	5.9	6.7	5.5			
33.8	34.2	33.8	31.6	36.5	35.1	34.6	36.3	37.3	34.8	35.0	36.2	34.3	34.0	34.7	33.5	32.5			
10.3	10.7	10.0	8.2	13.2	10.1	10.0	9.8	11.0	10.3	10.5	11.3	9.9	10.3	10.7	11.3	8.9			
7.3	7.5	7.2	6.6	8.5	7.3	7.3	8.9	6.0	7.2	7.8	8.0	6.8	7.3	7.5	7.5	7.0			
18.0	17.0	24.5	25.1	9.3	12.6	12.2	28.6	11.4	18.7	13.8	33.3	19.7	18.9	16.2	19.2	22.0			
22.2	21.1	25.5	32.7	13.3	12.4	13.2	14.3	5.7	17.9	12.9	17.2	23.4	24.5	20.8	28.8	31.5			
15.6	15.4	15.8	17.6	29.4	27.3	28.9	21.4	14.3	22.0	27.0	16.2	18.0	19.2	21.2	15.4	19.0			
37.4	40.6	27.8	8.4	40.7	36.6	40.6	21.4	5.7	24.5	39.4	28.3	9.5	26.5	36.3	25.0	5.0			
1.4	0.1	2.7	13.7	0.0	8.4	2.3	7.1	62.9	12.0	0.7	3.0	24.8	6.2	0.4	1.9	19.0			
3.7	4.0	1.4	1.5	4.0	1.6	1.5	7.1	0.0	3.0	3.9	0.0	2.9	2.5	3.4	3.8	1.0			
1.7	1.8	2.2	1.1	3.2	1.1	1.3	0.0	0.0	1.9	2.3	2.0	1.7	2.2	1.8	5.8	2.5			
23.6	22.2	28.5	37.8	14.4	23.7	22.7	40.0	28.2	25.6	22.5	26.4	29.7	7.6	14.4	16.9	31.0			
69.8	71.8	66.3	57.2	67.2	71.4	72.2	53.3	69.2	63.5	67.0	64.2	61.4	18.1	44.1	40.4	43.5			
38.3	40.1	30.1	25.9	39.1	47.0	48.0	26.7	38.5	35.8	37.1	44.3	33.0	8.3	20.1	16.9	21.8			
16.6	16.3	22.6	19.5	10.0	9.0	9.1	13.3	7.7	12.2	12.4	8.5	13.7	4.6	10.7	11.2	12.5			
4.8	4.9	2.6	4.4	6.0	6.4	5.2	6.7	20.5	6.6	6.2	4.7	7.3	1.5	3.3	4.5	4.4			
3.7	4.0	3.4	1.4	3.3	3.0	3.4	0.0	0.0	3.2	4.3	0.9	2.7	0.6	1.5	2.2	0.7			
6.5	6.5	7.6	6.0	8.7	6.0	6.4	6.7	2.6	5.8	7.0	5.7	4.7	3.1	8.4	5.6	4.1			
6.5	5.9	5.3	5.0	18.4	4.9	5.2	6.7	2.6	10.9	10.5	9.4	8.9	74.3	41.5	42.7	25.5			
18.2	17.4	20.0	27.2	11.4	17.7	17.0	26.7	23.1	16.8	16.1	18.9	18.2	5.3	10.6	14.6	19.2			
5.4	4.8	8.5	10.7	3.0	6.0	5.7	13.3	5.1	8.7	6.4	7.5	11.5	2.3	3.8	2.2	11.8			
49.0	50.8	39.3	39.1	45.8	50.2	49.8	53.3	56.4	44.9	47.6	34.0	45.5	11.1	25.9	22.5	31.7			
20.8	21.0	27.0	18.1	21.4	21.2	22.4	0.0	12.8	18.7	19.4	30.2	16.0	7.0	18.2	18.0	11.8			
13,124	11,856	320	875	137	235	202	8	22	493	231	36	205	376	224	20	86			
93.8	97.3	90.0	53.4	97.8	86.4	95.5	100.0	9.1	65.7	91.8	88.9	36.1	77.1	93.8	85.0	38.4			
5.5	2.0	9.4	45.6	2.2	13.2	4.0	0.0	90.9	33.5	6.9	11.1	63.4	20.2	3.1	15.0	61.6			
0.7	0.6	0.6	1.0	0.0	0.4	0.5	0.0	0.0	0.8	1.3	0.0	0.5	2.7	3.1	0.0	0.0			

APPENDIX TABLE A-5 Doctorate Recipients' Financial Resources in Support of Doctoral Programs, by Broad Field and Sex, 1998

Financial Resource	Total*		Physical Sciences		Engineering		Life Sciences		Social Sciences		Humanities		Education		Prof/Other Fields		
	Men	Women	Men	Women	Men	Women	Men	Women	Men	Women	Men	Women	Men	Women	Men	Women	
Loans (from any source)	N	5,292	4,653	719	234	616	74	879	713	1,053	1,400	1,022	913	663	1,033	340	286
	V	25.1%	30.7%	15.8%	16.5%	14.2%	11.2%	22.7%	21.5%	38.4%	44.1%	40.7%	37.8%	33.7%	31.2%	30.2%	34.0%
	H	100.0%	100.0%	13.6%	5.0%	11.6%	1.6%	16.6%	15.3%	19.9%	30.1%	19.3%	19.6%	12.5%	22.2%	6.4%	6.1%
Foreign (non-U.S.) Support	N	2,012	763	341	69	593	68	362	182	271	143	224	182	94	86	127	33
	V	9.5%	5.0%	7.5%	4.9%	13.7%	10.3%	9.4%	5.5%	9.9%	4.5%	8.9%	7.5%	4.8%	2.6%	11.3%	3.9%
	H	100.0%	100.0%	16.9%	9.0%	29.5%	8.9%	18.0%	23.9%	13.5%	18.7%	11.1%	23.9%	4.7%	11.3%	6.3%	4.3%
Fellowship, Scholarship	N	8,668	6,504	1,812	605	1,494	296	1,785	1,645	1,260	1,412	1,422	1,344	442	847	453	355
	V	41.1%	43.0%	39.9%	42.6%	34.5%	44.8%	46.1%	49.7%	45.9%	44.4%	56.7%	55.7%	22.5%	25.6%	40.3%	42.2%
	H	100.0%	100.0%	20.9%	9.3%	17.2%	4.6%	20.6%	25.3%	14.5%	21.7%	16.4%	20.7%	5.1%	13.0%	5.2%	5.5%
Dissertation Grant	N	1,952	2,096	217	74	117	37	320	401	468	612	610	582	95	253	125	137
	V	9.3%	13.8%	4.8%	5.2%	2.7%	5.6%	8.3%	12.1%	17.1%	19.3%	24.3%	24.1%	4.8%	7.6%	11.1%	16.3%
	H	100.0%	100.0%	11.1%	3.5%	6.0%	1.8%	16.4%	19.1%	24.0%	29.2%	31.3%	27.8%	4.9%	12.1%	6.4%	6.5%
Teaching Assistant	N	13,226	8,861	3,676	1,155	2,345	392	1,819	1,635	2,047	2,172	2,041	1,992	554	971	744	544
	V	62.7%	58.5%	81.0%	81.3%	54.1%	59.4%	47.0%	49.4%	74.6%	68.4%	81.3%	82.5%	28.2%	29.3%	66.1%	64.6%
	H	100.0%	100.0%	27.8%	13.0%	17.7%	4.4%	13.8%	18.5%	15.5%	24.5%	15.4%	22.5%	4.2%	11.0%	5.6%	6.1%
Research Assistant	N	9,935	5,685	2,766	839	2,772	409	2,023	1,629	1,103	1,347	535	557	322	587	414	317
	V	47.1%	37.6%	60.9%	59.1%	64.0%	62.0%	52.3%	49.2%	40.2%	42.4%	21.3%	23.1%	29.9%	0.0%	28.2%	37.6%
	H	100.0%	100.0%	27.8%	14.8%	27.9%	7.2%	20.4%	28.7%	11.1%	23.7%	5.4%	9.8%	5.9%	0.0%	3.2%	5.6%
Traineeship	N	863	1,010	85	48	74	22	510	576	149	293	21	23	13	35	11	13
	V	4.1%	6.7%	1.9%	3.4%	1.7%	3.3%	13.2%	17.4%	5.4%	9.2%	0.8%	1.0%	0.7%	1.1%	1.0%	1.5%
	H	100.0%	100.0%	9.8%	4.8%	8.6%	2.2%	59.1%	57.0%	17.3%	29.0%	2.4%	2.3%	1.5%	3.5%	1.3%	1.3%
Internship or Residency	N	958	1,134	156	39	239	22	78	52	348	805	44	50	65	143	28	23
	V	4.5%	7.5%	3.4%	2.7%	5.5%	3.3%	2.0%	1.6%	12.7%	25.3%	1.8%	2.1%	3.3%	4.3%	2.5%	2.7%
	H	100.0%	100.0%	16.3%	3.4%	24.9%	1.9%	8.1%	4.6%	36.3%	71.0%	4.6%	4.4%	6.8%	12.6%	2.9%	2.0%
Personal Savings	N	8,540	6,978	1,402	427	1,513	208	1,433	1,327	1,225	1,530	1,216	1,057	1,194	1,981	557	448
	V	40.5%	46.1%	30.9%	30.1%	34.9%	31.5%	37.0%	40.1%	44.7%	48.2%	48.4%	43.8%	60.8%	59.8%	49.4%	53.2%
	H	100.0%	100.0%	16.4%	6.1%	17.7%	3.0%	16.8%	19.0%	14.3%	21.9%	14.2%	15.1%	14.0%	28.4%	6.5%	6.4%
Other Personal Earnings During Graduate School	N	6,844	6,447	917	261	907	116	860	894	1,187	1,568	1,376	1,293	1,091	1,879	506	436
	V	32.5%	42.6%	20.2%	18.4%	20.9%	17.6%	22.2%	27.0%	43.3%	49.4%	54.8%	53.6%	55.5%	56.7%	45.0%	51.8%
	H	100.0%	100.0%	13.4%	4.0%	13.3%	1.8%	12.6%	13.9%	17.3%	24.3%	20.1%	20.1%	15.9%	29.1%	7.4%	6.8%
Family Earnings or Savings‡	N	7,328	6,807	1,179	415	1,148	200	1,338	1,322	1,183	1,628	1,195	1,202	835	1,641	450	399
	V	34.8%	45.0%	26.0%	29.2%	26.5%	30.3%	34.6%	39.9%	43.1%	51.2%	47.6%	49.8%	42.5%	49.5%	40.0%	47.4%
	H	100.0%	100.0%	16.1%	6.1%	15.7%	2.9%	18.3%	19.4%	16.1%	23.9%	16.3%	17.7%	11.4%	24.1%	6.1%	5.9%
Employer Reimbursement/ Assistance	N	2,584	2,099	317	100	605	62	301	367	306	342	262	220	589	880	204	128
	V	12.3%	13.9%	7.0%	7.0%	14.0%	9.4%	7.8%	11.1%	11.2%	10.8%	10.4%	9.1%	30.0%	26.6%	18.1%	15.2%
	H	100.0%	100.0%	12.3%	4.8%	23.4%	3.0%	11.6%	17.5%	11.8%	16.3%	10.1%	10.5%	22.8%	41.9%	7.9%	6.1%
Other	N	648	650	78	35	88	11	95	118	100	132	98	108	138	212	51	34
	V	3.1%	4.3%	1.7%	2.5%	2.0%	1.7%	2.5%	3.6%	3.6%	4.2%	3.9%	4.5%	7.0%	6.4%	4.5%	4.0%
	H	100.0%	100.0%	12.0%	5.4%	13.6%	1.7%	14.7%	18.2%	15.4%	20.3%	15.1%	16.6%	21.3%	32.6%	7.9%	5.2%
Unduplicated Total***	N	21,086	15,138	4,539	1,420	4,333	660	3,870	3,312	2,743	3,177	2,510	2,414	1,965	3,313	1,126	842

NOTE: In this table a recipient counts once in each source category from which he or she received support. Since students indicate multiple sources of support, the vertical percentages sum to more than 100 percent. (Data on the "primary" source of support for doctorate recipients are presented in the body of the Summary Report.) Field groupings may differ from those in reports published by federal sponsors of the Survey of Earned Doctorates. Furthermore, because the form of this question and its response categories changed in 1998, the ability to make trend comparison with previous cycles appears to be broken (except for teaching assistantships, research assistantships, and Foreign Support); see Appendix C: Technical Notes for details.

*V denotes vertical percentage; H denotes horizontal percentage.

**Excludes 174 individuals for whom gender was not reported.

***The 6,429 Ph.D.s who did not report sources of support are omitted from this total. Percentages are based only on known responses.

‡This category includes spouses and significant others.

APPENDIX TABLE A-6 State of Doctoral Institution of Doctorate Recipients, by Broad Field and Gender, 1998

State	Total**		Physical Sciences		Engineering		Life Sciences		Social Sciences		Humanities		Education		Prof./Other Fields	
	Men	Women	Men	Women	Men	Women	Men	Women	Men	Women	Men	Women	Men	Women	Men	Women
U.S. Total★	24,653	17,856	5,104	1,600	5,108	769	4,640	3,876	3,206	3,838	2,814	2,675	2,422	4,120	1,359	978
Alabama	337	237	62	17	78	8	87	67	25	39	9	12	54	80	22	14
Alaska	25	9	10	2	4	0	9	7	0	0	1	0	1	0	0	0
Arizona	468	290	103	36	91	9	73	50	59	63	63	44	54	71	25	17
Arkansas	106	63	13	1	10	1	35	17	2	5	10	3	29	32	7	4
California	2,769	1,933	663	192	630	101	466	384	424	564	320	306	154	301	112	85
Colorado	453	307	128	33	102	21	78	71	47	59	37	30	40	72	21	21
Connecticut	371	264	78	27	48	3	79	77	63	66	76	61	15	21	12	9
Delaware	102	71	28	7	26	5	9	7	13	14	7	7	18	30	1	1
Dist. of Columbia	254	248	43	16	32	7	29	37	51	72	56	52	22	41	21	23
Florida	1,019	915	178	68	169	16	132	94	137	217	74	57	227	396	102	67
Georgia	571	418	82	32	153	24	121	84	60	80	44	61	73	120	38	17
Hawaii	101	58	30	8	6	1	26	21	21	15	16	9	2	3	0	1
Idaho	63	27	13	4	7	2	18	6	1	0	2	1	19	14	3	0
Illinois	1,339	914	288	82	296	52	191	186	208	218	184	148	114	186	58	42
Indiana	648	433	140	46	149	21	107	92	64	80	102	92	54	82	32	20
Iowa	417	231	83	28	87	17	102	54	50	36	31	28	52	56	12	12
Kansas	281	204	41	22	41	9	73	32	40	41	34	33	43	56	9	11
Kentucky	207	135	34	10	27	2	54	36	18	25	39	24	19	30	16	8
Louisiana	326	229	67	13	43	6	78	73	41	34	52	37	26	56	19	10
Maine	21	29	2	4	3	2	7	9	2	5	3	1	3	8	1	0
Maryland	560	441	125	42	122	22	134	149	79	85	57	63	20	57	23	23
Massachusetts	1,311	849	305	85	311	60	226	219	188	182	145	139	67	109	69	55
Michigan	869	634	170	71	237	36	147	146	112	147	80	82	76	123	47	29
Minnesota	493	340	81	23	90	7	113	83	44	55	59	42	62	104	44	26
Mississippi	211	138	28	13	22	3	44	16	27	12	11	8	48	76	31	10
Missouri	463	315	80	23	102	7	88	73	56	62	38	48	62	83	37	19
Montana	61	36	16	2	3	1	22	14	6	4	0	0	13	15	1	0
Nebraska	165	149	24	12	12	2	57	42	21	28	14	14	21	39	16	12
Nevada	52	34	19	7	8	1	7	7	11	9	2	4	3	6	2	0
New Hampshire	71	48	28	11	8	2	24	14	3	7	4	8	4	6	0	0
New Jersey	498	330	122	37	119	20	67	68	62	65	96	90	13	33	19	17
New Mexico	190	115	48	10	48	7	30	16	18	21	14	15	23	40	9	6
New York	2,013	1,752	423	136	325	48	375	330	320	442	313	406	160	290	97	100
North Carolina	618	465	137	56	119	24	149	149	81	79	68	52	46	85	18	20
North Dakota	48	37	9	3	4	0	27	5	3	9	1	3	4	17	0	0
Ohio	1,082	778	217	55	275	30	182	175	101	152	113	109	128	213	66	44
Oklahoma	241	160	32	14	47	10	50	18	23	27	31	20	40	55	18	16
Oregon	246	180	50	21	30	7	88	61	28	20	20	24	22	41	8	6
Pennsylvania	1,288	933	216	71	346	55	178	174	164	187	146	156	146	222	92	68
Puerto Rico	22	81	1	4	1	0	5	1	7	49	2	3	6	24	0	0
Rhode Island	139	110	59	30	14	3	11	16	21	26	31	33	0	0	3	2
South Carolina	202	167	46	8	32	5	52	49	20	22	19	22	23	46	10	15
South Dakota	33	37	1	1	2	0	4	4	4	8	0	0	22	24	0	0
Tennessee	362	280	38	19	55	8	72	63	49	50	51	30	65	91	32	19
Texas	1,644	1,091	327	67	369	37	304	258	199	193	174	152	156	317	115	67
Utah	235	114	53	10	56	8	48	26	41	30	11	6	16	26	10	8
Vermont	27	35	2	2	7	2	13	7	4	11	0	3	1	10	0	0
Virginia	548	434	111	43	131	19	105	86	57	77	37	32	76	161	31	16
Washington	390	303	92	30	71	15	88	80	41	53	44	43	37	63	17	19
West Virginia	94	57	14	1	24	1	30	17	9	13	4	1	13	24	0	0
Wisconsin	557	377	122	38	113	22	118	101	76	76	69	61	26	60	33	19
Wyoming	42	21	22	7	3	0	8	5	5	4	0	0	4	5	0	0

NOTE: Field groupings may differ from those in reports published by federal sponsors of the Survey of Earned Doctorates.

**Excludes 174 individuals for whom gender was not reported.

★ Includes the 50 states, District of Columbia, and Puerto Rico..

APPENDIX TABLE A-7 Institutions Granting Research Doctorates, by Major Field, 1998

State/Institution	1998 Total	Physics and Astronomy	Chemistry	Earth, Atmos., and Marine Sciences	Math and Computer Sciences	Engineering	Biosciences	Health Sciences	Agricultural Sci.	Psychology	Other Social Sciences	History	Eng. And Amer. Language and Lit.	Other Humanities	Education	Professional/Other/Unknown Fields ^a	
TOTAL ALL INSTITUTIONS	42,683	1,584	2,217	838	2,100	5,919	5,848	1,500	1,192	3,676	3,399	988	1,076	3,435	6,559	2,352	
ALABAMA	574	29	19	6	25	86	79	45	30	48	16	7	9	5	134	12	
Alabama A&M University	10	6	0	0	0	1	1	0	2	0	0	0	0	0	0	0	
Auburn University	192	7	13	1	11	36	10	6	28	22	9	2	3	0	37	7	
United States Sports Academy	19	0	0	0	0	0	0	0	0	0	0	0	0	0	19	0	
Univ of Alabama-Birmingham	141	4	2	0	5	9	50	33	0	16	2	0	0	0	20	0	
Univ of Alabama-Huntsville	41	7	1	4	6	23	0	0	0	0	0	0	0	0	0	0	
Univ of Alabama	150	5	3	0	3	17	8	2	0	10	5	5	6	5	52	29	
Univ of South Alabama	21	0	0	1	0	0	10	4	0	0	0	0	0	0	6	0	
ALASKA	34	5	0	7	0	4	13	0	3	0	0	0	0	1	1	0	
Univ of Alaska	34	5	0	7	0	4	13	0	3	0	0	0	0	1	1	0	
ARIZONA	759	46	26	37	30	100	76	17	31	57	65	20	18	69	125	42	
Arizona State Univ	292	10	7	7	16	59	20	6	0	32	21	8	9	22	48	27	
Northern Arizona Univ	56	0	0	0	0	0	3	0	2	0	6	3	1	1	40	0	
Univ of Arizona	411	36	19	30	14	41	53	11	29	25	38	9	8	46	37	15	
ARKANSAS	169	5	6	2	1	11	25	7	20	7	0	8	1	4	61	11	
Arkansas State Univ	2	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	
U of Arkansas-Fayetteville	122	4	6	0	1	11	11	7	20	7	0	8	1	4	31	11	
U of Arkansas-Little Rock	31	1	0	2	0	0	0	0	0	0	0	0	0	0	28	0	
U of Arkansas-Med Sci Campus	14	0	0	0	0	0	14	0	0	0	0	0	0	0	0	0	
CALIFORNIA	4,731	212	283	119	250	736	665	125	64	564	433	142	124	360	457	197	
Azusa Pacific University	4	0	0	0	0	0	0	0	0	0	0	0	0	0	3	1	
Biola University	16	0	0	0	0	0	0	0	0	14	0	0	0	0	2	0	
California Inst of Technology	191	48	30	17	21	45	24	0	0	1	4	0	0	0	1	0	
Calif Sch Prof Psych-Alameda	63	0	0	0	0	0	0	0	0	62	0	0	0	0	0	1	
Calif. Sch Prof Psych-Fresno	37	0	0	0	0	0	0	0	0	37	0	0	0	0	0	0	
Calif Sch Prof Psych-LA	77	0	0	0	0	0	0	0	0	75	0	0	0	0	1	1	
Calif Sch Prof Psych-San Diego	79	0	0	0	0	1	0	0	0	76	0	0	0	1	1	0	
Claremont Graduate School	95	0	0	0	3	2	0	0	0	14	28	2	7	14	15	10	
Fielding Institute	38	0	0	0	0	0	0	0	0	23	2	0	0	0	2	11	
Fuller Theological Seminary	31	0	0	0	1	0	0	0	0	22	0	0	0	3	0	5	
Graduate Theological Union	22	0	0	0	0	0	0	0	0	0	0	0	0	11	1	10	
La Sierra Univ	4	0	0	0	0	0	0	0	0	0	0	0	0	0	1	3	
Loma Linda Univ	12	0	0	0	0	0	8	4	0	0	0	0	0	0	0	0	
Naval Postgraduate School	10	1	0	1	2	6	0	0	0	0	0	0	0	0	0	0	
Pacific Grad School of Psychology	27	0	0	0	0	0	0	0	0	27	0	0	0	0	0	0	
Pepperdine Univ	33	0	0	0	0	0	0	0	0	0	1	0	0	0	32	0	
Rand Grad Sch of Policy Studies	4	0	0	0	0	0	0	0	0	0	4	0	0	0	0	0	
Scripps Institute	22	0	9	0	0	0	13	0	0	0	0	0	0	0	0	0	
San Diego State Univ	32	0	0	0	0	1	7	5	0	11	1	0	0	0	7	0	
School of Theology at Claremont	2	0	0	0	0	0	0	0	0	1	0	0	0	0	1	0	
Stanford University	595	22	40	28	48	177	75	0	2	13	52	16	16	54	28	24	
U.S. International Univ	39	0	0	0	0	0	0	0	0	23	1	0	0	1	4	10	
Univ of California-Berkeley	748	37	54	10	55	153	92	28	21	18	87	35	29	74	20	35	
Univ of California-Davis	337	11	24	5	9	42	129	10	36	8	23	8	7	8	17	0	
Univ of California-Irvine	196	11	28	1	12	36	39	2	0	7	20	8	10	17	1	4	
Univ of California-Los Angeles	605	23	30	18	35	75	66	30	0	19	80	40	14	76	64	35	
Univ of California-Riverside	122	4	7	3	10	0	27	1	3	7	22	8	7	10	12	1	
Univ of California-San Diego	268	12	24	15	19	50	62	5	2	23	28	6	4	11	2	5	
Univ of California-San Francisco	91	1	8	0	0	3	48	21	0	2	6	1	0	0	0	1	
Univ of California-Santa Barbara	263	20	11	6	18	61	19	1	0	18	27	9	15	34	20	4	
Univ of California-Santa Cruz	87	15	7	6	3	7	20	0	0	2	10	3	7	5	2	0	
Univ of La Verne	41	0	0	0	0	0	0	0	0	1	0	0	0	0	40	0	
Univ of the Pacific	10	0	0	0	0	0	1	0	0	0	0	0	0	0	9	0	
Univ of San Diego	22	0	0	0	0	0	0	0	6	0	0	1	0	0	0	14	1
Univ of San Francisco	58	0	0	0	0	0	0	0	0	3	1	0	0	0	53	1	
Univ of Santa Clara	2	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	
Univ of Southern California	403	7	11	9	14	75	35	12	0	12	35	6	8	41	104	34	
Wright Institute, The	45	0	0	0	0	0	0	0	0	45	0	0	0	0	0	0	
COLORADO	764	31	44	54	33	126	93	23	33	49	57	8	15	44	112	42	
Colorado School of Mines	37	0	3	13	1	17	0	0	0	0	3	0	0	0	0	0	
Colorado State Univ	212	4	20	15	7	35	41	9	33	16	8	0	0	0	21	3	
Univ of Colorado	375	26	18	25	21	73	52	13	0	11	36	7	9	29	21	34	
Univ of Denver	74	1	2	1	3	1	0	0	0	14	9	1	6	4	27	5	
Univ of Northern Colorado	66	0	1	0	1	0	0	1	0	8	1	0	0	11	43	0	

NOTE: Field groupings may differ from those in reports published by federal sponsors of the Survey of Earned Doctorates.

*Includes 20 respondents for whom doctoral field is unknown.

Source: NSF/NIH/NEH/USED/USDA, Survey of Earned Doctorates

APPENDIX TABLE A-7 Institutions Granting Research Doctorates, by Major Field, 1998

NOTE: Field groupings may differ from those in reports published by federal sponsors of the Survey of Earned Doctorates.

*Includes 20 respondents for whom doctoral field is unknown.

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APPENDIX TABLE A-7 Institutions Granting Research Doctorates, by Major Field, 1998

State/Institution	1998 Total	Physics and Astronomy	Chemistry	Earth, Atmos., and Marine Sciences	Math and Computer Sciences	Engineering	Biosciences	Health Sciences	Agricultural Sci.	Psychology	Other Social Sciences	History	Eng. And Amer. Language and Lit.	Other Humanities	Education	Professional/Other/Unknown Fields ^a
INDIANA (continued)																
Purdue Univ	496	11	66	7	24	139	53	12	46	19	19	4	22	20	35	19
Univ of Notre Dame	117	6	6	0	7	31	18	0	0	5	15	6	7	13	1	2
IOWA	649	19	51	7	35	104	79	40	37	38	48	13	8	38	108	24
Drake Univ	6	0	0	0	0	0	0	0	0	0	0	0	0	0	6	0
Iowa State Univ	300	15	30	2	17	66	40	2	37	22	23	5	0	3	32	6
Maharishi International Univ	5	0	0	0	0	0	3	0	0	1	0	0	0	1	0	0
Univ of Iowa	327	4	21	5	18	36	36	38	0	15	25	8	8	34	61	18
Univ of Northern Iowa	11	0	0	0	0	2	0	0	0	0	0	0	0	0	9	0
KANSAS	485	9	35	5	14	50	62	13	30	48	33	16	16	35	99	20
Kansas State Univ	161	4	6	1	9	23	27	1	30	12	11	1	1	0	34	1
Univ of Kansas	287	5	25	4	0	15	35	10	0	31	22	15	15	35	56	19
Wichita State Univ	37	0	4	0	5	12	0	2	0	5	0	0	0	0	9	0
KENTUCKY	342	7	18	2	17	29	69	7	14	29	14	14	8	41	49	24
Southern Bapt Theol Seminary	30	0	0	0	0	0	0	0	0	0	0	1	0	18	1	10
Spalding Univ	10	0	0	0	0	0	0	0	0	0	0	0	0	0	9	0
Univ of Kentucky	227	7	9	2	16	21	49	6	14	18	11	13	7	18	23	13
Univ of Louisville	75	0	9	0	1	8	20	1	0	11	2	0	1	5	16	1
LOUISIANA	555	10	28	8	34	49	96	35	20	36	39	15	25	49	82	29
Grambling State Univ	10	0	0	0	0	0	0	0	0	0	0	0	0	0	10	0
Louisiana St U and A&M Col-Baton Rouge	258	8	14	8	11	33	39	6	20	22	16	6	12	21	33	9
Louisiana St U Med Schl-New Orleans	23	0	0	0	0	0	18	5	0	0	0	0	0	0	0	0
Louisiana St U Med Schl-Shreveport	2	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0
Louisiana Tech Univ	9	0	0	0	0	3	0	0	0	0	0	0	0	0	4	2
New Orleans Bapt Theol Seminary	25	0	0	0	0	0	0	0	0	0	0	1	0	13	1	10
Northeast Louisiana Univ	11	0	1	0	0	0	3	5	0	0	0	0	0	0	2	0
Tulane Univ of Louisiana	126	2	7	0	12	9	28	19	0	6	12	8	8	11	0	4
Univ of New Orleans	61	0	6	0	0	0	0	0	0	8	11	0	0	0	32	4
Univ of Southwestern Louisiana	30	0	0	0	11	4	6	0	0	0	0	0	5	4	0	0
MAINE	50	0	2	4	0	5	10	0	6	7	0	3	0	1	11	1
Univ of Maine	50	0	2	4	0	5	10	0	6	7	0	3	0	1	11	1
MARYLAND	1,002	55	38	17	57	144	164	106	13	71	93	21	13	86	77	47
Johns Hopkins Univ	363	20	13	9	9	43	84	77	0	14	50	13	3	18	9	1
Loyola College in Maryland	4	0	0	0	0	0	0	0	0	4	0	0	0	0	0	0
Morgan State Univ	4	0	0	0	0	0	0	0	0	0	0	0	0	0	4	0
Peabody Inst of Johns Hopkins	22	0	0	0	0	0	0	0	0	0	0	0	0	21	0	1
Uniformed Serv U of Hlth Sci	10	0	0	0	0	0	6	0	0	4	0	0	0	0	0	0
Univ of Maryland-Baltimore County	55	0	4	0	12	19	4	0	0	6	6	0	0	3	0	1
Univ of Maryland-College Park	476	35	18	8	36	82	34	10	12	42	37	8	10	44	64	36
University of Maryland-Eastern Shore	2	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0
Univ of Maryland-Baltimore Prof Schs	66	0	3	0	0	0	35	19	0	1	0	0	0	0	0	8
MASSACHUSETTS	2,174	128	119	33	112	377	355	83	9	101	270	51	37	196	176	127
American Internatl College	6	0	0	0	0	0	0	0	0	0	0	0	0	0	6	0
Boston College	100	5	2	0	0	0	13	8	0	6	10	4	2	15	20	15
Boston Univ	278	15	8	4	8	14	59	12	0	24	29	1	1	52	32	19
Brandeis Univ	90	3	5	0	9	1	21	2	0	2	27	6	7	5	1	1
Clark Univ	31	1	2	0	0	1	2	0	0	8	12	0	0	2	2	1
Harvard Univ	560	38	33	7	23	12	107	45	0	14	87	33	10	85	42	24
Mass Coll Pharm & Health Sci	2	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0
Mass Inst of Technology	492	40	29	19	41	229	52	0	0	2	48	1	0	2	2	27
New England Conserv of Music	4	0	0	0	0	0	0	0	0	0	0	0	0	3	1	0
Northeastern Univ	87	6	9	0	5	23	8	2	0	10	22	0	0	0	1	1
Simmons College	8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	8
Smith College	11	0	0	0	0	0	0	0	0	0	0	0	0	1	0	10
Springfield College	7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	7
Tufts Univ	81	3	3	1	2	7	33	3	0	6	11	1	7	2	1	1
Univ of Massachusetts-Amherst	298	13	23	2	16	54	24	9	9	21	18	5	10	29	45	20
Univ of Massachusetts-Boston	15	0	0	0	0	0	0	0	0	8	5	0	0	0	2	0
Univ of Massachusetts-Lowell	51	2	5	0	8	13	6	2	0	0	1	0	0	0	14	0
Univ of Massachussets-Worcester	26	0	0	0	0	0	26	0	0	0	0	0	0	0	0	0
Worcester Polytechnic Inst	27	2	0	0	0	23	2	0	0	0	0	0	0	0	0	0
MICHIGAN	1,509	60	90	18	75	275	171	66	56	122	139	27	30	105	199	76
Andrews Univ	19	0	0	0	0	0	0	0	0	3	0	0	0	3	12	1
Central Michigan Univ	4	0	0	0	0	0	0	0	0	4	0	0	0	0	0	0
Eastern Michigan Univ	5	0	0	0	0	0	0	0	0	0	0	0	0	0	5	0
Michigan State Univ	436	19	27	0	21	46	58	10	43	38	49	6	8	18	57	36

NOTE: Field groupings may differ from those in reports published by federal sponsors of the Survey of Earned Doctorates.

*Includes 20 respondents for whom doctoral field is unknown.

Source: NSF/NIH/NEH/USED/USDA, Survey of Earned Doctorates

APPENDIX TABLE A-7 Institutions Granting Research Doctorates, by Major Field, 1998

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APPENDIX TABLE A-7 Institutions Granting Research Doctorates, by Major Field, 1998

State/Institution	1998 Total	Physics and Astronomy		Chemistry		Earth, Atmos., and Marine Sciences		Math and Computer Sciences		Engineering		Biosciences		Health Sciences		Agricultural Sci.		Psychology		Other Social Sciences		History		Eng. And Amer. Language and Lit.		Other Humanities		Education		Professional/Other/Unknown Fields ^{s*}					
NEW YORK (continued)																																			
City U of NY-Grad Sch/U Ctr	333	15	14	6	16	18	44	7	0	51	48	6	21	60	10	17																			
Clarkson Univ	22	1	9	0	1	10	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0					
Columbia Univ	462	20	18	10	18	41	70	13	0	44	63	38	27	59	19	22																			
Columbia Univ-Teachers College	168	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0					
Cornell Univ	476	37	27	7	30	84	79	2	47	17	52	15	7	47	9	16																			
Cornell Univ Medical Campus	31	0	0	0	0	0	31	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0					
Fordham Univ	132	0	0	0	0	0	0	7	0	0	0	33	9	3	3	13	46	18																	
Hebrew Union College	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0					
Hofstra Univ	33	0	0	0	0	0	0	0	0	0	0	31	0	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1					
Jewish Theol Sem of America	12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0					
The Juilliard School	16	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0					
Long Island Univ-Brooklyn Campus	10	0	0	0	0	0	0	0	0	0	0	10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0					
Manhattan School of Music	9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0					
New School for Social Research	61	0	0	0	0	0	0	0	0	0	0	24	32	0	0	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0					
New York Medical College	5	0	0	0	0	0	0	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0					
New York Univ	430	6	6	2	23	2	52	29	1	33	31	11	44	92	58	40																			
Pace Univ	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5					
Polytechnic Univ	39	2	4	0	5	28	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0					
Rensselaer Polytechnic Inst	128	7	5	2	23	76	2	0	0	0	0	1	0	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	8					
Rockefeller Univ	24	1	0	0	0	0	22	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1					
St Johns Univ-Queens	48	0	0	0	0	0	4	2	0	19	1	3	7	1	11	0																			
State Univ of NY-Albany	174	6	7	3	12	0	15	2	1	28	16	2	11	16	40	15																			
State Univ of NY-Binghamton	81	0	6	0	15	6	3	0	0	7	29	1	4	7	2	1																			
State Univ of NY-Buffalo	294	5	18	6	10	40	45	13	0	29	15	5	17	28	52	11																			
State Univ of NY-Stony Brook	264	21	16	9	32	27	56	1	1	14	18	7	14	46	0	2															2				
SUNY Coll-Environ Sci & Forestry	15	0	1	0	0	1	4	0	8	0	1	0	0	0	0	0																			
SUNY College of Optometry	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0																			
SUNY-Hlth Sci Ctr-Brooklyn	13	0	0	0	0	0	12	1	0	0	0	0	0	0	0	0																			
SUNY-Hlth Sci Ctr-Syracuse	6	0	0	0	0	0	6	0	0	0	0	0	0	0	0	0																			
Syracuse Univ	163	8	3	0	11	14	8	2	0	20	39	1	2	7	29	19																			
Union College	3	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0															1				
Union Theol Seminary	7	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0														5					
Univ of Rochester	219	30	14	2	14	16	51	4	0	10	15	5	7	30	14	7																			
Yeshiva Univ	26	0	0	0	0	0	25	0	0	0	0	0	0	0	0	0															1				
NORTH CAROLINA	1,084	33	69	23	69	143	204	59	35	66	94	18	39	63	131	38																			
Duke Univ	243	13	11	8	8	31	65	0	1	13	32	7	19	29	0	6																			
East Carolina Univ Sch of Med	15	0	0	0	0	0	0	12	0	0	0	0	0	0	0	0														3					
North Carolina A & T	3	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0																			
North Carolina St U-Raleigh	322	10	8	7	30	94	39	2	33	11	22	0	0	0	0	65	1																		
U of N Carolina-Chapel Hill	391	8	45	8	31	15	62	53	1	23	39	11	14	25	25	31																			
U of N Carolina-Greensboro	78	0	0	0	0	0	1	4	0	19	1	0	6	9	38	0																			
Wake Forest Univ	32	2	5	0	0	0	25	0	0	0	0	0	0	0	0	0																			
NORTH DAKOTA	85	1	6	1	4	4	21	2	9	12	0	2	1	1	21	0																			
North Dakota State Univ	31	0	4	0	4	1	12	2	8	0	0	0	0	0	0	0																			
Univ of North Dakota	54	1	2	1	0	3	9	0	1	12	0	2	1	1	21	0																			
OHIO	1,863	66	122	15	69	305	250	84	25	178	75	51	39	133	341	110																			
Air Force Inst of Technology	29	4	0	0	2	23	0	0	0	0	0	0	0	0	0	0																			
Bowling Green State Univ	93	0	9	0	8	0	7	1	0	12	5	3	8	17	13	10																			
Case Western Reserve Univ	177	6	14	0	7	46	33	17	0	12	7	6	7	4	0	18																			
Cleveland State Univ	33	0	6	0	0	6	3	0	0	0	0	1	0	0	0	11	6	6	7	4	0	11	6												
Hebrew Union College	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0																			
Kent State Univ	156	7	4	2	9	0	11	2	0	38	6	3	6	3	2	53	13																		
Medical College of Ohio-Toledo	23	0	0	0	0	0	22	1	0	0	0	0	16	1	4	2	1	15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Miami Univ	51	0	3	0	0	0	9	0	0	16	1	4	2	1	15	0																			

APPENDIX TABLE A-7 Institutions Granting Research Doctorates, by Major Field, 1998

State/Institution	1998											Other Humanities	Education	Professional/Other/ Unknown Fields ^a		
	Total	Physics and Astronomy	Chemistry	Earth, Atmos., and Marine Sciences	Math and Computer Sciences	Engineering	Biosciences	Health Sciences	Agricultural Sci.	Psychology	Other Social Sciences					
OREGON (continued)																
Oregon Health Sciences Univ	29	0	0	0	0	0	24	3	0	1	0	0	1	0	0	
Oregon State Univ	187	3	12	11	8	23	42	12	37	2	7	0	0	29	1	
Portland State Univ	38	2	2	2	2	9	1	0	0	2	4	0	0	10	4	
Univ of Oregon	160	10	5	5	5	0	18	9	0	13	19	5	15	23	9	
PENNSYLVANIA	2,234	62	100	17	111	404	252	75	27	165	188	46	51	206	369	161
Allegheny Univ. of Health Sciences	24	1	0	0	0	0	2	0	0	2	1	0	0	12	0	6
Bryn Mawr College	204	8	4	1	41	99	5	0	0	3	14	4	0	6	0	19
Carnegie Mellon Univ	52	3	2	0	3	33	2	0	0	4	0	0	0	0	1	4
Drexel Univ	14	0	4	0	0	0	1	0	0	2	0	0	1	3	0	3
Duquesne Univ	46	0	0	0	0	0	0	0	0	1	2	0	17	13	12	1
Indiana Univ of Pennsylvania	96	6	2	2	6	35	5	0	0	7	2	2	9	1	17	2
Lehigh Univ	30	0	0	0	0	0	12	2	0	16	0	0	0	0	0	0
Pennsylvania State Univ	597	24	29	11	10	144	59	18	26	42	31	5	7	27	128	36
Philadelphia Coll. of Pharmacy & Sci.	10	0	4	0	0	0	4	2	0	0	0	0	0	0	0	0
Temple Univ	292	2	9	0	12	2	20	9	0	47	25	13	3	36	90	24
Thomas Jefferson Univ	19	0	0	0	0	0	19	0	0	0	0	0	0	0	0	0
Univ of Pennsylvania	436	15	20	1	18	46	78	12	0	16	71	16	10	65	33	35
Univ of Pittsburgh	373	3	22	2	21	45	45	29	1	25	42	5	4	38	69	22
Villanova Univ	5	0	4	0	0	0	0	0	0	0	0	0	0	0	1	0
Westminster Theol Seminary	15	0	0	0	0	0	0	0	0	0	0	1	0	5	0	9
Widener Univ	21	0	0	0	0	0	0	3	0	0	0	0	0	0	18	0
PUERTO RICO	103	0	3	2	0	1	6	0	0	56	0	4	0	1	30	0
Caribbean Ctr for Adv Studies	37	0	0	0	0	0	0	0	0	36	0	0	0	1	0	0
Inter Amer U PR-Metro Campus	11	0	0	0	0	0	0	0	0	0	0	0	0	0	11	0
Univ of Puerto Rico - Rio Piedras	51	0	3	0	0	0	5	0	0	20	0	4	0	0	19	0
Univ of Puerto Rico-Mayaguez	4	0	0	2	0	1	1	0	0	0	0	0	0	0	0	0
RHODE ISLAND	249	23	20	22	24	17	20	4	3	22	25	9	11	44	0	5
Brown Univ	174	20	12	8	22	12	15	0	0	7	24	9	6	39	0	0
Salve Regina Univ	3	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0
Univ of Rhode Island	72	3	8	14	2	5	5	4	3	15	1	0	5	2	0	5
SOUTH CAROLINA	369	4	24	10	16	37	68	25	8	17	25	5	16	20	69	25
Clemson University	101	2	10	0	4	29	30	0	8	0	5	0	0	0	9	4
Medical Univ of South Carolina	24	0	3	0	0	0	20	1	0	0	0	0	0	0	0	0
South Carolina State Univ	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
Univ of South Carolina	243	2	11	10	12	8	18	24	0	17	20	5	16	20	59	21
SOUTH DAKOTA	70	0	2	0	0	2	6	0	2	8	4	0	0	0	46	0
S Dakota Sch of Mines & Tech	2	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0
South Dakota State Univ	10	0	2	0	0	0	2	0	2	0	4	0	0	0	0	0
Univ of South Dakota	58	0	0	0	0	0	4	0	0	8	0	0	0	0	46	0
TENNESSEE	643	13	17	3	24	63	109	22	4	48	52	13	18	50	156	51
East Tennessee State Univ	21	0	0	0	0	0	5	0	0	0	0	0	0	0	16	0
Meharry Medical College	15	0	0	0	0	0	14	1	0	0	0	0	0	0	0	0
Mid-America Baptist Theol Sem	8	0	0	0	0	0	0	0	0	0	0	0	0	4	0	4
Middle Tennessee State Univ	10	0	1	0	0	0	0	0	0	0	2	2	1	2	2	0
Tennessee State Univ	35	0	0	0	0	0	0	0	0	6	1	0	0	0	26	2
Tennessee Technological Univ	3	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0
Univ of Memphis	87	0	2	0	2	7	5	1	0	18	4	5	0	2	26	15
Univ of Tennessee-Knoxville	237	8	6	3	8	34	32	12	4	14	26	2	10	8	45	25
Univ of Tennessee-Memphis	12	0	0	0	0	0	9	3	0	0	0	0	0	0	0	0
Vanderbilt Univ	215	5	8	0	14	19	44	5	0	10	19	4	7	34	41	5
TEXAS	2,736	89	122	63	120	407	388	108	66	213	179	54	61	211	473	182
Baylor College of Medicine	44	0	0	0	0	0	43	1	0	0	0	0	0	0	0	0
Baylor Univ	33	0	0	0	1	0	8	0	0	1	3	0	0	7	13	0
Dallas Theological Seminary	6	0	0	0	0	0	0	0	0	0	0	0	0	1	0	5
Lamar Univ	2	0	0	0	0	1	0	0	0	0	0	0	0	0	1	0
Rice Univ	115	5	4	9	13	33	7	0	0	2	19	5	7	11	0	0
Sam Houston State Univ	7	0	0	0	0	0	0	0	0	7	0	0	0	0	0	0
Southern Methodist Univ	46	2	0	2	7	16	2	0	0	4	8	0	0	5	0	0
Southwestern Baptist Theol Sem	36	0	0	0	0	0	0	0	0	3	0	0	0	15	1	17
Stephen F Austin St Univ	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0
Texas A&M Univ-College Station	528	12	39	17	31	115	74	8	55	29	47	8	9	2	58	24
Texas A&M Univ-Commerce	49	0	0	0	0	0	0	0	0	5	0	0	0	0	44	0
Texas A&M Univ-Kingsville	28	0	0	0	0	0	0	0	2	0	0	0	0	0	26	0
Texas Christian Univ	24	3	4	0	0	0	1	0	0	1	0	8	4	3	0	0
Texas Southern Univ	21	0	0	0	0	0	0	0	0	0	0	0	0	0	21	0

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*Includes 20 respondents for whom doctoral field is unknown.

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		Physics and Astronomy	Chemistry	Earth, Atmos., and Marine Sciences	Math and Computer Sciences	Engineering	Biosciences	Health Sciences	Agricultural Sci.	Psychology	Other Social Sciences	History	Eng. And Amer. Language and Lit.				
TEXAS (continued)																	
Texas Tech Univ	168	5	7	1	7	25	16	0	8	32	5	4	2	10	28	18	
Texas Woman's Univ	88	0	0	0	0	0	4	38	0	17	2	0	0	0	16	11	
Univ of Dallas	4	0	0	0	0	0	0	0	0	1	1	0	2	0	0	0	
Univ of Houston	183	8	11	1	7	2	13	2	0	27	15	4	11	6	65	11	
Univ of North Texas	160	3	12	2	13	1	7	0	0	30	4	2	5	16	50	15	
Univ of North Texas-Hlth Sci Ctr	10	0	0	0	0	0	9	0	0	0	0	0	0	0	1	0	
Univ of St. Thomas	3	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	
Univ of Texas-Arlington	97	2	2	0	4	35	4	0	0	3	6	2	1	16	0	22	
Univ of Texas-Austin	834	39	38	20	32	160	58	38	0	40	58	21	20	110	145	55	
Univ of Texas-Dallas	50	10	4	6	4	6	8	1	0	2	3	0	0	2	0	4	
Univ of Texas-El Paso	14	0	0	4	0	8	0	0	0	2	0	0	0	0	0	0	
U Tex-Hlth Sci Ctr-Houston	66	0	0	0	1	0	46	14	0	0	1	0	0	0	0	4	
U Tex-Hlth Sci Ctr-San Antonio	24	0	0	0	0	0	0	20	4	0	0	0	0	0	0	0	
U Tex-Med Branch-Galveston	30	0	0	0	0	0	24	2	0	0	0	0	0	4	0	0	
U Tex-Southwestern Med Ctr	65	0	1	1	0	5	44	0	0	14	0	0	0	0	0	0	
UTAH	353	10	28	6	20	66	51	14	9	40	31	3	2	12	42	19	
Brigham Young Univ	63	1	5	0	5	11	4	0	1	19	3	0	0	0	14	0	
Univ of Utah	200	5	21	5	13	37	32	13	0	9	12	3	2	12	19	17	
Utah State Univ	90	4	2	1	2	18	15	1	8	12	16	0	0	0	9	2	
VERMONT	62	0	2	0	2	9	19	0	1	15	0	0	0	3	11	0	
Middlebury College	3	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	
Univ of Vermont	59	0	2	0	2	9	19	0	1	15	0	0	0	0	11	0	
VIRGINIA	998	36	35	22	64	157	131	34	28	82	54	23	12	34	238	48	
College of William & Mary	998	8	3	5	3	0	1	0	0	0	0	3	0	2	18	0	
George Mason Univ	998	7	1	1	28	8	2	9	2	22	12	1	0	1	20	1	
Hampton Univ	998	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Old Dominion Univ	998	2	0	4	4	14	19	4	0	15	2	0	0	0	8	2	
Presbyterian Schl of Christ Educ	3	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	
Regent Univ	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6	
Union Theol Seminary	5	0	0	0	0	0	0	0	0	0	0	0	0	2	0	3	
Univ of Virginia	303	12	14	9	12	41	42	4	0	25	24	17	12	29	55	7	
Virginia Commonwealth Univ & Med Coll	86	0	3	0	0	1	45	14	0	4	0	0	0	0	12	7	
Virginia Polytech Inst & St Univ	359	3	14	3	17	93	22	3	26	16	16	2	0	0	122	22	
WASHINGTON	694	29	31	30	32	86	104	32	32	46	49	14	13	60	100	36	
Gonzaga Univ	13	0	0	0	0	0	0	0	0	0	0	0	0	0	13	0	
Seattle Pacific Univ	4	0	0	0	0	0	0	0	0	0	0	0	0	0	4	0	
Seattle Univ	30	0	0	0	0	0	0	0	0	0	0	0	0	0	30	0	
Univ of Washington	478	23	24	29	27	65	68	27	18	29	33	11	11	55	29	29	
Washington State Univ	169	6	7	1	5	21	36	5	14	17	16	3	2	5	24	7	
WEST VIRGINIA	151	3	3	2	7	25	28	9	10	17	5	2	1	2	37	0	
Marshall Univ	4	0	0	0	0	0	4	0	0	0	0	0	0	0	0	0	
West Virginia Univ	147	3	3	2	7	25	24	9	10	17	5	2	1	2	37	0	
WISCONSIN	938	36	51	17	57	135	147	34	38	51	103	30	22	78	86	53	
Marquette Univ	58	0	2	0	0	17	2	0	0	3	0	5	2	12	15	0	
Medical College of Wisconsin	17	0	0	1	0	0	14	2	0	0	0	0	0	0	0	0	
Univ of Wisconsin-Madison	760	34	44	15	46	109	123	24	38	37	86	25	11	62	64	42	
Univ of Wisconsin-Milwaukee	103	2	5	1	11	9	8	8	0	11	17	0	9	4	7	11	
WYOMING	63	4	7	11	7	3	10	0	3	9	0	0	0	0	9	0	
Univ of Wyoming	63	4	7	11	7	3	10	0	3	9	0	0	0	0	9	0	

NOTE: Field groupings may differ from those in reports published by federal sponsors of the Survey of Earned Doctorates.

*Includes 20 respondents for whom doctoral field is unknown.

Source: NSF/NIH/NEH/USED/USDA, Survey of Earned Doctorates

APPENDIX TABLE A-7 Institutions Granting Research Doctorates, by Major Field, 1998

Top 50 Doctorate-Granting Institutions, 1998

1.	University of Texas-Austin	834	26.	U of North Carolina-Chapel Hill	391
2.	University of Wisconsin-Madison	760	27.	Indiana University-Bloomington	380
3.	University of California-Berkeley	748	28.	University of Colorado at Boulder	375
4.	University of Minnesota Twin Cities	724	29.	University of Pittsburgh-Main Campus	373
5.	University of Illinois-Urbana/Champaign	706	30.	Northwestern University	371
6.	University of Michigan-Ann Arbor	687	31.	University of Georgia	369
7.	Ohio State University-Main Campus	664	32.	University of Chicago	368
8.	University of California-Los Angeles	605	33.	Rutgers University-New Brunswick	364
9.	Pennsylvania State University-Main Campus	597	34.	Johns Hopkins University	363
10.	Stanford University	595	35.	Yale University	362
11.	Harvard University	560	36.	Virginia Polytechnic Inst & State Univ	359
12.	Nova Southeastern University	543	37.	University of California-Davis	337
13.	Texas A&M University-College Station	528	38.	CU of NY-Grad Sch/University Center	333
14.	Purdue University-Main Campus	496	39.	University of Iowa	327
15.	Massachusetts Institute of Technology	492	40.	North Carolina St U-Raleigh	322
16.	University of Washington	478	41.	Florida State University	306
{	17. University of Maryland-College Park	476	42.	University of Virginia-Main Campus	303
	17. Cornell University-Endowed Colleges	476	43.	Iowa State University	300
	19. Columbia University in the City of New York	462	44.	University of Massachusetts-Amherst	298
20.	University of Florida	457	45.	SUNY at Buffalo	294
{	21. Michigan State University	436	46.	Arizona State University-Main Campus	292
	21. University of Pennsylvania	436	46.	Temple University	292
	23. New York University	430	48.	University of Kansas-Main Campus	287
	24. University of Arizona	411	49.	University of Nebraska-Lincoln	282
	25. University of Southern California	403	50.	Boston University	278

Source: NSF/NIH/NEH/USED/USDA, Survey of Earned Doctorates

APPENDIX B: Trend Tables, 1988-1998

Appendix B includes the following two tables:

- B1: Number of Doctorate Recipients, by Subfield, 1988-1998
- B2: Number of Doctorate Recipients, by Sex, Race/Ethnicity, and Citizenship, 1978, 1983, and 1988-1998

TABLE B-1: Table B-1 presents data for the most recent decade by subfield of doctorate. In general, the subfields correspond to the fields on the questionnaire's Specialties List located at the back of this report; some, however, do not appear on the current Specialties List because they are no longer included in the survey taxonomy. A dash (-) in a column indicates that the field was not on the Specialties List for that year.

Field groupings in this table may differ from those in reports published by federal sponsors of the Survey of Earned Doctorates (SED); see inside the back cover for a description of field groupings as reported in these tables. The "general" field categories—for example, "chemistry, general"—include individuals who either received the doctorate in the general subject area or did not indicate a particular specialty field. The "other" field categories—for example, "chemistry, other"—include individuals whose specified doctoral discipline was not among the specialty fields.

The seven tables in Appendix A present additional information on the most recent cohort of research doctorate recipients by field of doctorate.

TABLE B-2: Table B-2 displays, by sex and citizenship, data on the race/ethnicity of doctorate recipients for 1978, 1983 and the past decade. Table B-2 contains three panels, each displayed on a separate page. The first panel includes all doctorates; the others disaggregate the data by sex.

New follow-up procedures implemented in 1990 and later years have increased coverage of several variables, including citizenship and race/ethnicity. One result has been greater postsurvey adjustment to racial/ethnic data than in earlier years. (Note: The greatest adjustment was to the numbers of black Doctorate recipients in 1990 and 1991—an increase of about 7.5 percent each year.)

The racial/ethnic question has undergone several revisions over the years. In 1977 it was modified to correspond to a standard question format recommended by the Federal Interagency Committee on Education and adopted by the Office of Management and Budget (OMB) for use in federally sponsored surveys; an explanation of the effect of these changes is detailed on page 13 of *Summary Report 1977*. (Note: Changes in the OMB guidelines prompted the moving of persons having origins in the Indian subcontinent from the white category to the Asian category.) In 1980 the item was further revised in two ways: (1) the Hispanic category was subdivided into Puerto Rican, Mexican American, and other Hispanic to provide more detail for users of the racial/ethnic data, and (2) respondents were asked to check only one racial category. (Before 1980 doctorate recipients could check more than one category to indicate their race.) The item was modified again 1982 to separate the questions on race and ethnicity. Since then respondents have been asked to first check one of four racial group categories (American Indian, Asian, black, or white) and then indicate whether or not they are Hispanic. In Table B-2, *Doctorate Recipients who reported Hispanic heritage, regardless of racial designation, are counted as Hispanic*. The remaining survey respondents are then counted in their respective racial groups. (Note: Doctorate recipients who checked the category "American Indian or Alaskan Native" are identified as American Indian in this report.)

Tables A-2 and A-4 in Appendix A present additional information on the most recent cohort of doctorate recipients by race/ethnicity.

APPENDIX TABLE B-1 Number of Doctorate Recipients, by Subfield, 1988-1998

Subfield	Year of Doctorate										
	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998
TOTAL ALL FIELDS	33,500	34,327	36,067	37,534	38,890	39,801	41,034	41,743	42,414	42,555*	42,683**
PHYSICAL SCIENCES	5,309	5,455	5,859	6,280	6,502	6,496	6,822	6,808	6,674	6,667	6,739
MATHEMATICS	749	859	892	1,039	1,058	1,146	1,118	1,190	1,122	1,125	1,177
Applied Mathematics	142	158	185	193	213	188	206	211	230	242	265
Algebra	54	50	39	72	69	84	78	82	78	78	75
Analysis and Functional Analysis	76	103	90	132	105	105	107	99	100	103	130
Geometry	44	47	42	66	45	44	35	45	72	70	54
Logic	20	12	19	23	28	19	29	35	16	23	16
Number Theory	26	23	26	30	25	42	37	35	42	46	46
Mathematical Statistics	152	167	157	206	217	228	205	205	178	181	204
Topology	27	37	50	57	58	54	38	51	55	62	65
Computing Theory and Practice	12	12	12	19	12	18	16	14	18	14	18
Operations Research	29	22	29	16	22	37	26	36	21	20	17
Mathematics, General	134	177	191	180	209	276	269	305	233	155	163
Mathematics, Other	33	51	52	45	55	51	72	72	79	131	124
COMPUTER SCIENCE	515	612	705	800	869	880	903	997	921	905	923
Computer Science	442	519	612	720	791	825	833	913	837	824	817
Information Sciences and Systems	73	93	93	80	78	55	70	84	84	81	106
PHYSICS AND ASTRONOMY	1,302	1,274	1,393	1,411	1,537	1,544	1,692	1,652	1,676	1,597	1,584
Astronomy	66	49	52	50	55	76	66	89	84	71	91
Astrophysics	64	64	76	75	79	69	78	84	108	125	117
Acoustics	16	15	21	13	18	27	20	18	19	19	18
Chemical, and Atomic/Molecular	77	74	87	76	85	95	140	110	129	106	99
Electron	2	4	2	1	-	-	-	-	-	-	-
Elementary Particle	174	135	163	182	153	170	176	183	175	170	173
Fluids	17	14	17	14	17	19	12	18	21	24	26
Nuclear	88	81	73	66	86	82	90	91	87	106	92
Optics	65	78	76	85	94	96	104	98	129	123	104
Plasma and High-Temperature	65	61	42	58	65	62	79	46	48	39	55
Polymer	20	7	11	17	29	29	23	33	19	24	-
Solid State and Low-Temperature Physics	252	296	306	372	408	336	388	371	364	328	313
Physics, General	271	269	323	247	297	340	343	355	323	255	190
Physics, Other	125	127	144	155	163	143	167	166	156	212	282
CHEMISTRY	2,015	1,970	2,100	2,194	2,214	2,137	2,257	2,162	2,148	2,143	2,217
Analytical	301	289	293	304	304	286	334	317	346	350	384
Inorganic	250	256	242	260	268	237	262	258	249	277	287
Nuclear	7	6	13	14	7	8	10	5	5	8	5
Organic	531	511	452	538	512	518	544	483	506	564	597
Medicinal/Pharmaceutical	73	64	48	83	69	99	102	96	96	105	115
Physical	318	310	325	364	398	336	334	338	300	334	278
Polymer	81	78	81	111	83	107	117	116	121	110	123
Theoretical	50	46	55	45	59	53	52	40	57	48	41
Chemistry, General	310	312	524	400	449	431	447	458	396	261	286
Chemistry, Other	94	98	67	75	65	62	55	51	72	86	101
EARTH, ATMOS., & MARINE SCI.	728	740	769	836	824	789	852	807	807	897	838
Atmospheric Physics and Chem.	19	15	18	20	36	13	27	27	22	44	38
Atmospheric Dynamics	25	16	20	21	23	23	27	16	21	25	24
Meteorology	35	27	20	31	28	34	32	25	35	28	25
Atmos. Sci./Meteorology, General	14	14	23	26	27	22	37	44	33	36	22
Atmos.Sci./Meteorology, Other	10	15	2	10	6	7	6	18	14	15	16
Geology	144	165	166	192	166	197	194	186	162	164	171
Geochemistry	46	39	56	64	62	50	59	42	49	49	58
Geophysics and Seismology	83	87	91	117	108	101	106	93	101	108	106
Paleontology	24	17	21	24	25	21	17	20	14	23	23
Mineralogy, Petrology	19	36	26	36	29	9	21	19	23	18	14
Stratigraphy, Sedimentation	30	24	25	29	23	28	27	16	12	23	24
Geomorphology and Glacial Geology	9	10	14	18	12	16	13	11	11	26	20
Applied Geology	7	6	6	1	0	0	0	0	0	0	0
Geological & Related Sci., General	8	19	31	30	18	15	18	21	27	16	13
Geological & Related Sci., Other	31	28	28	33	31	17	24	22	22	17	40
Environmental Science	58	68	50	35	57	68	61	81	83	96	73
Hydrology and Water Resources	24	24	13	16	29	25	30	24	31	43	35
Oceanography	81	87	89	85	82	98	91	83	107	114	94
Marine Sciences	28	26	39	27	32	27	34	32	27	30	18
Misc. Physical Sciences, Other	33	17	31	21	30	18	28	27	13	22	24
ENGINEERING	4,187	4,543	4,894	5,214	5,438	5,698	5,822	6,008	6,305	6,098	5,919
Aerospace, Aeronautic. & Astronautic.	150	178	192	207	234	228	230	252	287	270	242
Agricultural	70	102	101	83	84	86	89	73	104	79	73
Bioengineering and Biomedical	114	115	129	149	147	171	173	189	220	210	207
Ceramic Sciences	30	35	43	58	42	42	39	39	41	39	24
Chemical	624	625	561	621	607	624	630	602	681	662	667
Civil	488	498	505	509	540	563	602	572	599	592	587
Communications	24	25	35	21	30	22	33	29	32	33	40
Computer	100	117	131	178	175	167	202	189	208	227	210
Electrical, Electronics	886	995	1,110	1,206	1,278	1,354	1,438	1,513	1,500	1,458	1,343
Engineering Mechanics	105	110	111	113	132	128	132	108	105	93	86
Engineering Physics	9	16	16	23	25	21	17	17	37	24	15
Engineering Science	32	27	37	42	51	55	46	56	52	45	50

APPENDIX TABLE B-1 Number of Doctorate Recipients, by Subfield, 1988-1998

Subfield	Year of Doctorate										
	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998
Environmental Health Engineering	43	40	48	66	54	61	82	84	98	63	63
Industrial/Manufacturing	127	162	151	165	196	236	228	284	258	242	227
Materials Science	252	257	307	361	365	416	433	476	470	481	482
Mechanical	610	650	773	762	855	902	883	917	947	924	936
Metallurgical	92	88	90	70	78	77	67	73	61	60	59
Mining and Mineral	17	33	39	38	26	24	23	19	31	33	21
Naval Architecture, Marine Eng.	9	9	8	5	-	-	-	-	-	-	-
Nuclear	104	86	114	107	120	108	85	105	113	102	97
Ocean	21	20	17	21	21	24	29	21	26	34	29
Operations Research	44	68	46	76	56	56	47	48	74	74	62
Petroleum	33	29	49	28	54	52	42	48	52	51	48
Polymer/Plastics	28	58	48	42	64	61	53	58	65	54	59
Systems	44	30	51	48	37	57	51	47	47	49	68
Engineering, General	49	61	75	78	64	47	39	60	60	51	30
Engineering, Other	82	109	107	137	103	116	129	129	137	148	194
LIFE SCIENCES	6,164	6,342	6,605	6,933	7,115	7,395	7,739	7,918	8,255	8,311	8,540
BIOLOGICAL SCIENCES	4,111	4,116	4,328	4,650	4,799	5,092	5,203	5,376	5,723	5,777	5,848
Biochemistry	612	669	678	765	715	846	804	824	794	830	798
Biomedical Sciences	-	-	-	-	-	-	-	93	140	158	184
Biophysics	97	87	103	100	125	103	123	155	142	147	166
Biotechnology Research	-	-	-	-	-	8	14	4	6	11	12
Bacteriology	7	11	15	11	13	14	18	13	16	13	13
Plant Genetics	26	18	31	23	33	41	30	35	41	30	40
Plant Pathology	30	22	37	50	32	41	40	32	38	33	18
Plant Physiology	74	47	51	65	68	48	70	55	73	47	61
Botany, Other	112	117	104	105	107	105	117	102	105	91	113
Anatomy	88	80	70	77	75	76	66	64	47	50	35
Biometrics and Biostatistics	47	46	47	59	63	74	72	67	81	84	75
Cell Biology	118	133	145	149	188	231	237	236	233	250	299
Ecology	155	161	166	189	180	177	201	203	245	255	292
Developmental Biology/Embryology	7	10	22	37	48	57	62	64	96	115	127
Endocrinology	21	21	24	33	27	16	26	20	24	17	30
Entomology	133	139	147	138	139	114	123	121	136	123	138
Biological Immunology	179	152	153	177	181	169	161	190	238	214	245
Molecular Biology	364	413	413	481	527	582	598	617	651	771	741
Microbiology	333	340	335	372	377	433	423	426	444	409	384
Neuroscience	163	181	192	238	238	276	284	309	404	435	412
Nutritional Sciences	127	128	118	106	132	134	147	136	142	124	137
Parasitology	20	20	13	20	17	17	22	14	22	17	15
Toxicology	108	111	91	86	105	100	120	126	138	180	156
Human and Animal Genetics	118	112	153	160	142	172	203	202	212	217	196
Human and Animal Pathology	112	105	101	122	114	130	128	109	135	106	91
Human and Animal Pharmacology	252	242	244	266	279	274	259	278	316	300	256
Human and Animal Physiology	225	272	278	272	266	271	289	262	275	227	258
Zoology, Other	167	132	122	125	134	114	117	145	100	96	111
Biological Sciences, General	256	231	333	278	315	305	288	348	291	208	217
Biological Sciences, Other	160	116	142	146	159	164	161	126	138	219	228
HEALTH SCIENCES	882	974	956	1,041	1,112	1,197	1,296	1,330	1,324	1,422	1,500
Speech-Lang. Pathology & Audiology	93	91	93	90	82	98	95	106	94	88	95
Environmental Health	52	35	38	38	44	38	51	51	58	67	54
Health Systems/Services Admin.	-	-	-	-	-	35	53	62	60	66	63
Public Health	121	129	123	132	157	153	142	152	156	139	157
Epidemiology	97	107	102	115	108	120	168	153	149	151	166
Exercise Physiology/Sci., Kinesiology	-	-	-	-	-	-	87	118	105	105	129
Nursing	247	308	261	325	338	373	336	354	354	420	399
Pharmacy	95	111	116	115	160	146	148	144	145	142	156
Rehabilitation/Therapeutic Services	-	-	-	17	25	36	43	20	26	34	33
Veterinary Medicine	48	48	70	56	63	61	56	55	65	46	48
Health Sciences, General	29	19	36	28	30	38	41	35	22	45	17
Health Sciences, Other	100	126	117	125	105	99	76	80	90	119	183
AGRICULTURAL SCIENCES	1,171	1,252	1,321	1,242	1,204	1,106	1,240	1,212	1,208	1,112	1,192
Agricultural Economics	156	164	145	168	141	137	162	173	169	133	155
Agricultural Business & Management	0	2	2	1	0	1	0	3	2	1	2
Animal Breeding and Genetics	27	23	22	18	23	18	17	19	12	24	18
Animal Nutrition	54	67	54	57	41	52	58	50	54	55	45
Dairy Science	12	16	20	19	14	11	11	14	9	14	10
Poultry Science	10	11	17	13	22	16	21	11	12	9	11
Fisheries Science and Management	42	34	42	39	26	38	48	49	46	45	30
Animal Sciences, Other	86	95	90	92	97	74	86	85	90	61	60
Agronomy and Crop Science	141	140	143	117	123	104	143	114	110	77	96
Plant Breeding and Genetics	83	64	87	69	82	68	81	72	63	67	69
Plant Pathology	46	63	64	90	63	58	55	52	90	65	66
Plant Protection-Pest Management	1	6	4	2	-	-	-	-	-	-	-
Plant Sciences, Other	23	15	23	17	29	28	24	30	21	20	37
Food Sciences	16	1	-	-	-	-	-	-	-	-	-
Food Distribution	0	0	0	0	0	0	1	-	-	-	-
Food Engineering	6	11	10	12	14	9	16	7	11	13	13
Food Sciences, Other	119	147	141	137	151	141	152	135	142	174	153
Soil Sciences	18	-	-	-	-	-	-	-	-	-	-
Soil Chemistry/Microbiology	33	28	27	24	24	26	21	27	29	32	27
Soil Sciences, Other	62	75	91	78	63	59	69	72	78	56	74
Horticulture Science	61	75	101	78	65	62	65	67	73	44	60

APPENDIX TABLE B-1 Number of Doctorate Recipients, by Subfield, 1988-1998

Subfield	Year of Doctorate										
	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998
Wildlife Management	3	-	-	-	-	-	-	-	-	-	-
Forestry Science	15	-	-	-	-	-	-	-	-	-	-
Forest Biology	21	22	27	17	29	18	20	24	19	22	20
Forest Engineering	3	1	2	2	2	3	0	4	0	13	2
Forest Management	18	21	14	22	16	17	17	20	22	21	27
Wood Sci. & Pulp/Paper Tech.	7	16	16	16	21	20	26	26	18	25	25
Conservation/Renewable Nat. Res.	7	12	16	19	9	13	21	24	13	17	25
Forestry and Related Sci., Other	35	57	62	45	62	55	59	71	56	50	69
Wildlife/Range Management	36	52	58	59	55	54	52	50	64	50	55
Agricultural Sciences, General	9	7	5	3	9	10	4	6	5	8	8
Agricultural Sciences, Other	21	27	38	28	23	14	11	7	4	18	35
SOCIAL SCIENCES (INCL. PSYCH.)	5,781	5,961	6,093	6,152	6,216	6,545	6,613	6,635	6,814	7,037	7,075
Anthropology	325	325	324	341	320	342	384	375	396	431	425
Area Studies	16	17	22	24	33	36	34	27	28	10	14
Criminology	43	32	42	35	37	39	41	44	60	49	55
Demography/Population Studies	19	22	20	28	17	22	23	15	11	24	31
Economics	825	872	836	861	885	906	913	952	979	997	973
Econometrics	27	26	26	24	25	24	26	27	29	31	25
Geography	129	105	131	108	111	137	146	150	165	149	154
International Relations/Affairs	77	94	97	88	76	102	112	73	99	88	97
Political Science and Government	392	430	462	434	513	507	589	600	621	661	662
Public Policy Analysis	73	79	87	111	107	98	94	93	104	126	97
Sociology	449	436	428	465	495	513	525	540	516	574	549
Statistics	47	69	69	31	29	48	46	48	48	56	60
Urban Affairs/Studies	86	62	67	90	86	123	132	103	106	92	75
Social Sciences, General	28	26	23	36	33	32	21	35	26	26	30
Social Sciences, Other	171	158	178	226	186	196	148	124	135	157	147
PSYCHOLOGY	3,074	3,208	3,281	3,250	3,263	3,420	3,379	3,429	3,340	3,440	3,563
Clinical	1,095	1,259	1,337	1,305	1,309	1,373	1,285	1,291	1,325	1,268	1,350
Cognitive and Psycholinguistics	83	79	76	94	101	104	129	104	128	166	113
Comparative	7	8	8	7	2	5	8	4	3	6	6
Counseling	482	501	466	497	507	488	497	470	464	487	448
Developmental and Child	176	148	159	155	170	202	179	152	188	215	267
Human/Individual & Family Develop.	-	-	-	-	-	-	129	150	151	123	118
Experimental	135	146	143	142	154	143	139	151	128	145	149
Educational	103	105	98	110	91	91	69	74	92	61	61
Family and Marriage Counseling	-	-	-	-	-	-	-	57	52	64	51
Industrial and Organizational	118	104	126	142	138	159	137	155	162	185	189
Personality	18	28	20	13	17	22	19	16	24	25	24
Physiological/Psychobiology	85	62	46	45	55	85	93	92	80	77	92
Psychometrics	11	6	8	9	5	9	5	10	11	8	
Quantitative	12	11	15	7	10	16	17	13	19	17	15
School	115	107	82	82	88	95	84	91	82	84	106
Social	140	128	145	147	139	125	153	155	170	181	186
Psychology, General	368	364	371	324	295	306	280	306	279	319	302
Psychology, Other	126	152	181	171	182	197	156	138	133	129	196
HUMANITIES	3,555	3,552	3,822	4,099	4,444	4,482	4,744	5,061	5,116	5,424	5,499
History, American	209	206	211	251	277	269	310	344	355	372	407
History, Asian	-	-	-	-	-	-	43	54	54	54	70
History, European	127	107	151	127	176	162	180	185	187	245	230
History/Philosophy of Sci. & Tech.	22	20	26	27	28	37	27	41	37	34	43
History, General	103	85	111	121	102	116	140	148	101	82	86
History, Other	142	120	113	137	141	142	144	128	123	176	152
Classics	56	51	58	55	58	61	84	62	72	53	84
Comparative Literature	139	103	97	150	163	153	163	191	164	181	162
Linguistics	166	188	167	227	266	214	221	201	230	244	219
Speech and Rhetorical Studies	37	35	38	86	98	111	142	139	155	137	168
Letters, General	16	13	19	17	18	18	22	43	28	23	22
Letters, Other	43	60	52	44	38	37	25	34	61	60	82
American Studies	70	76	72	92	81	101	88	94	115	82	100
Archeology	23	26	22	33	33	38	34	35	21	35	34
Art History/Criticism/Conservation	134	145	135	125	154	158	182	181	176	186	220
Music	504	521	572	587	641	613	685	713	699	727	694
Philosophy	222	270	243	285	279	274	302	298	369	447	408
Religion	217	215	219	187	231	257	252	248	317	299	327
Drama/Theater Arts	92	79	106	91	95	91	102	80	103	116	91
LANGUAGE AND LITERATURE	1,147	1,152	1,308	1,350	1,465	1,524	1,537	1,718	1,618	1,746	1,718
American	186	192	229	253	291	293	296	327	314	407	388
English	531	528	567	599	612	655	647	752	699	686	688
French	101	106	123	100	124	137	129	151	142	150	137
German	76	73	78	71	96	105	67	93	88	82	106
Italian	14	20	25	32	20	19	32	35	24	23	33
Spanish	137	134	173	173	179	179	212	209	196	250	207
Russian	13	13	19	25	28	28	38	28	37	39	43
Slavic	5	7	7	14	15	13	10	16	11	9	15
Chinese	12	9	16	19	20	21	25	20	29	23	18
Japanese	6	13	9	7	12	11	12	7	10	19	11
Hebrew	12	10	14	11	20	15	10	11	12	7	8
Arabic	14	6	7	4	12	10	4	8	6	4	9
Other Language and Literature	40	41	41	42	36	38	55	61	50	47	55

APPENDIX TABLE B-1 Number of Doctorate Recipients, by Subfield, 1988-1998

Subfield	Year of Doctorate										
	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998
Humanities, General	25	19	28	29	21	30	32	25	39	25	23
Humanities, Other	61	61	74	78	79	76	72	110	92	100	159
EDUCATION	6,362	6,281	6,510	6,454	6,677	6,689	6,708	6,649	6,772	6,549	6,559
Curriculum and Instruction	815	841	839	807	900	856	819	896	896	914	885
Educational Admin. and Supervision	1,749	1,633	1,663	1,428	1,290	1,340	1,207	1,086	1,170	1,016	949
Educational Leadership	0	0	1	485	694	783	792	889	989	1,033	1,114
Educ./Instruct. Media Design	67	76	55	73	62	96	111	121	107	92	91
Educ. Stat./Research Methods	51	59	59	80	61	64	68	63	76	58	56
Educ. Assess., Test., & Meas.	55	42	40	32	45	23	28	19	32	30	35
Educational Psychology	323	301	323	323	346	290	311	297	309	360	325
School Psychology	98	85	87	90	88	86	97	71	114	115	112
Social/Phil. Found. of Educ.	122	110	86	109	101	109	140	130	125	138	129
Special Education	257	259	225	226	260	277	241	254	278	268	248
Counseling Educ./Couns. & Guidance	325	264	301	270	259	288	284	268	277	207	269
Higher Educ./Evaluation & Research	399	373	424	344	381	357	428	457	481	504	430
Pre-elementary/Early Childhood	83	63	42	85	98	97	91	70	81	42	54
Elementary Education	93	99	110	73	73	65	71	61	46	56	62
Junior High Education	1	-	-	-	-	-	-	-	-	-	-
Secondary Education	67	53	56	40	28	33	24	24	34	25	55
Adult and Continuing Education	229	236	211	210	208	233	215	235	210	162	168
TEACHING FIELDS	989	970	922	973	1,008	943	960	924	863	905	951
Agricultural Education	32	35	38	49	43	54	52	35	32	38	25
Art Education	42	39	44	28	46	38	33	39	41	30	46
Business Education	44	40	34	32	16	27	25	21	20	25	30
English Education	57	51	52	58	61	53	56	60	57	62	53
Foreign Languages Education	53	33	31	46	50	48	54	60	44	45	73
Health Education	86	100	95	78	98	83	97	99	90	58	70
Home Economics Education	17	19	10	21	12	14	11	15	13	13	8
Technical/Industrial Arts Education	11	17	17	13	11	16	20	15	11	19	30
Mathematics Education	56	69	65	73	62	69	74	92	100	91	115
Music Education	76	97	78	96	96	80	89	96	91	100	94
Nursing Education	34	29	24	18	29	19	24	18	23	22	14
Physical Education and Coaching	184	176	191	185	167	161	139	104	101	108	108
Reading Education	74	95	82	102	121	95	97	85	66	68	77
Science Education	67	48	72	72	73	73	85	73	96	76	109
Social Science Education	23	13	11	19	19	9	10	14	12	25	15
Speech Education	5	1	5	1	-	-	-	-	-	-	-
Technical Education	13	28	15	25	35	21	30	20	24	32	18
Trade and Industrial Education	67	47	18	17	11	24	24	13	12	16	14
Teacher Ed./Spec. Acad. & Voc., Other	48	33	40	40	58	59	40	65	30	77	52
Education, General	358	414	535	428	443	411	484	429	353	338	235
Education, Other	281	403	531	378	332	338	337	355	331	286	391
PROFESSIONAL/OTHER FIELDS	2,142	2,193	2,284	2,402	2,498	2,496	2,586	2,664	2,478	2,452	2,332
BUSINESS AND MANAGEMENT	1,033	1,067	1,036	1,163	1,248	1,281	1,283	1,327	1,276	1,236	1,165
Accounting	175	186	172	172	180	183	179	168	156	150	154
Banking/Financial Support Services	148	151	134	172	172	170	134	163	114	69	83
Business Admin. and Management	265	245	277	204	241	324	319	340	393	421	342
Business/Managerial Economics	27	27	21	19	21	33	40	37	38	47	56
International Business	-	-	-	-	-	-	22	23	36	39	33
Mgmt. Info. Sys./Business Data Proc.	-	-	-	72	103	102	117	111	94	100	86
Marketing Management and Research	126	130	120	134	139	166	167	153	153	153	143
Business Statistics	6	15	10	5	-	-	-	-	-	-	-
Operations Research	50	52	46	58	67	63	54	59	64	44	57
Organizational Behavior	74	95	64	72	81	73	102	100	108	121	103
Bus. Mgmt./Admin. Serv., General	75	57	70	123	112	87	87	92	67	28	36
Bus. Mgmt./Admin. Serv., Other	87	109	122	132	132	80	62	81	53	64	72
COMMUNICATIONS	247	306	323	332	330	321	371	380	389	332	372
Communications Research	72	85	87	72	45	33	40	40	60	51	52
Journalism	21	15	21	7	-	-	-	-	-	-	-
Mass Communications	-	-	-	68	85	117	156	121	137	117	141
Radio and Television	12	29	17	6	-	-	-	-	-	-	-
Communication Theory	-	-	-	25	47	41	45	53	37	40	48
Communications, General	70	79	86	70	76	69	68	77	81	74	62
Communications, Other	72	98	112	84	77	61	62	89	74	50	69
OTHER PROFESSIONAL FIELDS	812	766	858	836	880	867	891	931	774	770	721
Architectural Environmental Design	31	43	41	67	60	54	67	55	61	65	51
Home Economics	58	55	74	29	58	57	31	31	28	35	17
Law	33	26	34	23	20	29	33	37	26	27	31
Library Science	57	60	42	52	51	70	42	47	49	40	34
Parks/Recreation/Leisure/Fitness	-	-	-	-	44	37	54	29	24	36	-
Public Administration	92	97	88	107	108	117	135	128	104	95	105
Social Work	241	206	246	240	248	237	272	303	256	247	236
Theology/Religious Education	251	232	271	273	292	243	262	273	213	177	160
Professional Fields, General	2	0	3	3	1	1	1	1	2	4	0
Professional Fields, Other	47	47	59	42	42	15	11	2	6	56	51
OTHER/UNKNOWN FIELDS	50	54	67	71	40	27	41	26	39	114	94

*Total includes 17 respondents with missing data for doctoral field. **Includes 20 respondents with missing data for doctoral field.

NOTE: Dash (-) indicates that the field was not on the questionnaire's Specialties List that year. Field groupings may differ from those in reports published by federal sponsors of the Survey of Earned Doctorates.

APPENDIX TABLE B-2a Number of Doctorate Recipients, by Gender, Race/Ethnicity, and Citizenship, 1978, 1983, 1988-1998 (Total All Doctorates)

	Year of Doctorate												
	1978	1983	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998
TOTAL MEN AND WOMEN*	30,875	31,281	33,500	34,327	36,067	37,534	38,890	39,801	41,034	41,743	42,414	42,555	42,683
U.S. Citizen	25,291	24,360	23,290	23,401	24,905	25,573	26,010	26,449	27,147	27,740	27,741	27,934	28,218
Permanent Visa	1,344	1,274	1,622	1,626	1,698	1,857	1,980	2,259	3,747	4,319	3,765	2,928	2,696
Temporary Visa	3,421	4,498	6,195	6,648	8,093	9,311	9,953	9,932	9,406	8,810	9,610	8,478	8,642
Unknown Citizenship	819	1,149	2,393	2,652	1,371	793	947	1,161	734	874	1,298	3,215	3,127
Total Known Race/Ethnicity	28,451	29,397	30,354	30,955	33,878	35,780	37,193	38,284	39,834	40,330	40,636	38,847	39,293
U.S. Citizen	23,778	23,740	22,907	23,025	24,531	25,085	25,657	26,217	26,893	27,437	27,398	26,880	27,352
Permanent Visa	1,313	1,248	1,545	1,564	1,637	1,796	1,906	2,225	3,699	4,278	3,733	2,867	2,607
Temporary Visa	3,246	4,253	5,840	6,297	7,557	8,788	9,535	9,675	9,114	8,544	9,363	8,251	8,371
Unknown Citizenship	114	156	62	69	153	111	95	167	128	71	142	849	963
American Indian†	61	82	94	94	98	132	152	121	146	149	189	166	189
U.S. Citizen	60	81	94	94	97	130	149	120	143	149	186	166	189
Permanent Visa★	0	1	0	0	0	2	0	0	0	0	1	0	0
Temporary Visa★	1	0	0	0	1	0	2	1	3	0	2	0	0
Unknown Citizenship	0	0	0	0	0	0	1	0	0	0	0	0	0
Asian	2,394	3,123	4,780	5,192	6,293	7,528	8,290	8,671	9,367	9,708	9,821	9,004	8,575
U.S. Citizen	390	492	614	633	641	789	848	891	950	1,140	1,091	1,296	1,168
Permanent Visa	642	550	621	635	665	742	916	1,126	2,596	3,169	2,606	1,814	1,552
Temporary Visa	1,311	2,006	3,518	3,907	4,931	5,949	6,505	6,604	5,799	5,378	6,093	5,483	5,388
Unknown Citizenship	51	75	27	17	56	48	21	50	22	21	31	411	467
Black	1,381	1,384	1,267	1,247	1,354	1,466	1,434	1,615	1,683	1,825	1,837	1,769	1,903
U.S. Citizen	1,031	922	818	822	901	1,010	971	1,111	1,101	1,309	1,315	1,336	1,467
Permanent Visa	73	83	152	141	149	156	145	169	178	168	142	139	119
Temporary Visa	269	365	291	273	291	293	311	322	389	337	364	250	254
Unknown Citizenship	8	14	6	11	13	7	7	13	15	11	16	44	63
Hispanic	861	969	1,048	1,063	1,228	1,319	1,402	1,431	1,534	1,541	1,623	1,686	1,866
U.S. Citizen	486	539	595	582	721	731	778	834	884	919	950	1,047	1,190
Permanent Visa	67	69	98	112	116	136	131	139	146	142	155	136	121
Temporary Visa	293	342	349	363	386	446	482	454	502	472	512	436	490
Unknown Citizenship	15	19	6	6	5	6	11	4	2	8	6	67	65
White	23,754	23,839	23,165	23,359	24,905	25,335	25,915	26,446	27,104	27,107	27,166	26,222	26,760
U.S. Citizen	21,811	21,706	20,786	20,894	22,171	22,425	22,911	23,261	23,815	23,920	23,856	23,035	23,338
Permanent Visa	531	545	674	676	707	760	714	791	779	799	829	778	815
Temporary Visa	1,372	1,540	1,682	1,754	1,948	2,100	2,235	2,294	2,421	2,357	2,392	2,082	2,239
Unknown Citizenship	40	48	23	35	79	50	55	100	89	31	89	327	368
Unknown Race/Ethnicity	2,424	1,884	3,146	3,372	2,189	1,754	1,697	1,517	1,200	1,413	1,778	3,708	3,390
U.S. Citizen	1,513	620	383	376	374	488	353	232	254	303	343	1,054	866
Permanent Visa	31	26	77	62	61	61	74	34	48	41	32	61	89
Temporary Visa	175	245	355	351	536	523	418	257	292	266	247	227	271
Unknown Citizenship	705	993	2,331	2,583	1,218	682	852	994	606	803	1,156	2,366	2,164

★In most cases, non-U.S. American Indians are citizens of Canada or of a Latin American country.

* Total includes individuals who did not report sex.

†Includes Alaskan Native.

APPENDIX TABLE B-2b Doctorates: MEN

	Year of Doctorate												
	1978	1983	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998
TOTAL MEN	22,553	20,748	21,680	21,814	22,960	23,525	24,235	24,382	25,058	25,158	25,267	24,944	24,653
U.S. Citizen	17,936	15,121	13,724	13,396	14,165	14,385	14,518	14,512	14,732	14,965	14,700	14,915	14,750
Permanent Visa	1,052	952	1,164	1,139	1,189	1,223	1,290	1,468	2,636	2,908	2,483	1,831	1,662
Temporary Visa	2,966	3,871	5,134	5,444	6,632	7,506	7,946	7,835	7,306	6,840	7,384	6,454	6,418
Unknown Citizenship	599	804	1,658	1,835	974	411	481	567	384	445	700	1,744	1,823
Total Known Race/Ethnicity	20,747	19,376	19,410	19,404	21,338	22,353	23,164	23,529	24,319	24,300	24,228	22,975	22,689
U.S. Citizen	16,822	14,677	13,448	13,117	13,899	14,030	14,261	14,343	14,563	14,754	14,473	14,323	14,242
Permanent Visa	1,029	930	1,097	1,094	1,149	1,177	1,236	1,444	2,602	2,884	2,460	1,794	1,603
Temporary Visa	2,817	3,648	4,822	5,143	6,174	7,072	7,605	7,641	7,093	6,628	7,201	6,276	6,218
Unknown Citizenship	79	121	43	50	116	74	62	101	61	34	94	582	626
American Indian†	51	51	52	49	52	74	82	61	74	82	103	77	104
U.S. Citizen	50	50	52	49	52	74	82	60	71	82	102	77	104
Permanent Visa★	0	1	0	0	0	0	0	0	0	0	0	0	0
Temporary Visa★	1	0	0	0	0	0	0	1	3	0	1	0	0
Unknown Citizenship	0	0	0	0	0	0	0	0	0	0	0	0	0
Asian	1,972	2,541	3,845	4,163	5,030	5,872	6,417	6,603	7,060	7,105	7,200	6,422	6,032
U.S. Citizen	287	312	414	446	427	482	531	552	590	670	614	740	643
Permanent Visa	531	430	456	459	481	489	604	732	1,877	2,198	1,784	1,143	986
Temporary Visa	1,114	1,731	2,957	3,245	4,077	4,865	5,264	5,282	4,576	4,222	4,779	4,245	4,063
Unknown Citizenship	40	68	18	13	45	36	18	37	17	15	23	294	340
Black	900	835	699	685	733	788	771	840	889	881	933	860	820
U.S. Citizen	582	413	317	328	351	421	396	441	411	490	535	524	520
Permanent Visa	65	73	126	125	128	131	123	138	142	125	106	108	87
Temporary Visa	251	341	251	222	243	232	246	251	329	261	286	194	174
Unknown Citizenship	2	8	5	10	11	4	6	10	7	5	6	34	39
Hispanic	649	635	678	662	760	806	860	874	866	911	931	976	1,055
U.S. Citizen	330	288	321	307	380	370	410	423	438	460	478	535	606
Permanent Visa	54	45	64	69	69	88	72	94	80	79	86	82	71
Temporary Visa	254	288	288	283	309	344	371	356	346	369	363	311	344
Unknown Citizenship	11	14	5	3	2	4	7	1	2	3	4	48	34
White	17,175	15,314	14,136	13,845	14,763	14,813	15,034	15,151	15,430	15,321	15,061	14,640	14,678
U.S. Citizen	15,573	13,614	12,344	11,987	12,689	12,683	12,842	12,867	13,053	13,052	12,744	12,447	12,369
Permanent Visa	379	381	451	441	471	469	437	480	503	482	484	461	459
Temporary Visa	1,197	1,288	1,326	1,393	1,545	1,631	1,724	1,751	1,839	1,776	1,772	1,526	1,637
Unknown Citizenship	26	31	15	24	58	30	31	53	35	11	61	206	213
Unknown Race/Ethnicity	1,806	1,372	2,270	2,410	1,622	1,172	1,071	853	739	858	1,039	1,969	1,964
U.S. Citizen	1,114	444	276	279	266	355	257	169	169	211	227	592	508
Permanent Visa	23	22	67	45	40	46	54	24	34	24	23	37	59
Temporary Visa	149	223	312	301	458	434	341	194	213	212	183	178	200
Unknown Citizenship	520	683	1,615	1,785	858	337	419	466	323	411	606	1,162	1,197

★In most cases, non-U.S. American Indians are citizens of Canada or of a Latin American country.

†Includes Alaskan Native.

APPENDIX TABLE B-2c Doctorates: WOMEN

	Year of Doctorate												
	1978	1983	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998
TOTAL WOMEN	8,322	10,533	11,819	12,513	13,106	13,873	14,436	15,122	15,819	16,414	16,945	17,251	17,856
U.S. Citizen	7,355	9,239	9,566	10,005	10,740	11,185	11,491	11,932	12,412	12,773	13,041	12,990	13,452
Permanent Visa	292	322	458	487	508	633	687	788	1,110	1,410	1,282	1,096	1,018
Temporary Visa	455	627	1,061	1,204	1,461	1,794	1,990	2,069	2,076	1,952	2,215	2,015	2,212
Unknown Citizenship	220	345	734	817	397	261	268	333	221	279	407	1,150	1,174
Total Known Race/Ethnicity	7,704	10,021	10,944	11,551	12,539	13,417	14,016	14,736	15,500	16,022	16,403	15,859	16,579
U.S. Citizen	6,956	9,063	9,459	9,908	10,632	11,053	11,396	11,872	12,327	12,683	12,925	12,554	13,107
Permanent Visa	284	318	448	470	487	619	669	779	1,096	1,393	1,273	1,072	996
Temporary Visa	429	605	1,018	1,154	1,383	1,708	1,920	2,021	2,013	1,910	2,158	1,966	2,142
Unknown Citizenship	35	35	19	19	37	37	31	64	64	36	47	267	334
American Indian†	10	31	42	45	46	58	70	60	72	67	86	89	85
U.S. Citizen	10	31	42	45	45	56	67	60	72	67	84	89	85
Permanent Visa★	0	0	0	0	0	2	0	0	0	0	1	0	0
Temporary Visa★	0	0	0	0	1	0	2	0	0	0	1	0	0
Unknown Citizenship	0	0	0	0	0	0	1	0	0	0	0	0	0
Asian	422	582	935	1,029	1,262	1,648	1,862	2,054	2,297	2,596	2,616	2,575	2,527
U.S. Citizen	103	180	200	187	214	306	317	338	359	470	477	555	524
Permanent Visa	111	120	165	176	183	253	311	392	718	970	822	671	559
Temporary Visa	197	275	561	662	854	1,077	1,231	1,312	1,217	1,150	1,310	1,232	1,318
Unknown Citizenship	11	7	9	4	11	12	3	12	3	6	7	117	126
Black	481	549	568	562	621	678	663	773	792	944	904	909	1,081
U.S. Citizen	449	509	501	494	550	589	575	670	690	819	780	812	947
Permanent Visa	8	10	26	16	21	25	22	31	36	43	36	31	31
Temporary Visa	18	24	40	51	48	61	65	70	59	76	78	56	80
Unknown Citizenship	6	6	1	1	2	3	1	2	7	6	10	10	23
Hispanic	212	334	370	401	468	513	542	556	668	630	692	710	809
U.S. Citizen	156	251	274	275	341	361	368	411	446	459	472	512	583
Permanent Visa	13	24	34	43	47	48	59	45	66	63	69	54	50
Temporary Visa	39	54	61	80	77	102	111	97	156	103	149	125	145
Unknown Citizenship	4	5	1	3	3	2	4	3	0	5	2	19	31
White	6,579	8,525	9,029	9,514	10,142	10,520	10,879	11,293	11,671	11,785	12,105	11,576	12,077
U.S. Citizen	6,238	8,092	8,442	8,907	9,482	9,741	10,069	10,393	10,760	10,868	11,112	10,586	10,968
Permanent Visa	152	164	223	235	236	291	277	311	276	317	345	316	356
Temporary Visa	175	252	356	361	403	468	511	542	581	581	620	553	599
Unknown Citizenship	14	17	8	11	21	20	22	47	54	19	28	121	154
Unknown Race/Ethnicity	618	512	875	962	567	456	420	386	319	392	542	1,392	1,277
U.S. Citizen	399	176	107	97	108	132	95	60	85	90	116	436	345
Permanent Visa	8	4	10	17	21	14	18	9	14	17	9	24	22
Temporary Visa	26	22	43	50	78	86	70	48	63	42	57	49	70
Unknown Citizenship	185	310	715	798	360	224	237	269	157	243	360	883	840

★In most cases, non-U.S. American Indians are citizens of Canada or of a Latin American country.

†Includes Alaskan Native.

APPENDIX C: Technical Notes

I. Survey Response Rates

SURVEY RESPONSE RATES*			
<u>Year</u>	<u>Self-Report Rate</u>	<u>Year</u>	<u>Self-Report Rate</u>
1967	97.3	1983	95.5
1968	97.6	1984	95.1
1969	96.6	1985	94.8
1970	98.1	1986	93.5
1971	97.5	1987	93.1
1972	97.3	1988	92.9
1973	97.5	1989	92.3
1974	94.2	1990	93.6
1975	97.3	1991	94.6
1976	97.2	1992	95.1
1977	96.6	1993	94.7
1978	96.3	1994	94.6
1979	96.4	1995	94.1
1980	96.2	1996	92.8
1981	95.7	1997	91.5
1982	95.3	1998	91.5

* The rates for 1967-1997 reflect late responses. The rate for 1998 may increase slightly in the next year if additional questionnaires are received after survey closure. Self-report rates for 1980-1998 are determined from the "source of response" indicator in the doctorate records. Because this indicator was not coded prior to 1980, survey forms for 1965-1979 are assumed to be self-reported if "month signed" or "marital status" is present. "Marital status" is not available from sources other than the doctorate recipient.

As shown in the table above, 91.5 percent of 1998 U.S. doctorate recipients completed survey forms. This percentage is what has been referred to as the "self-report" rate. For the remaining doctorate recipients, "skeleton" records were created using basic information obtained from doctorate granting institutions or from commencement programs. This skeleton information includes Ph.D. institution, Ph.D. field, Ph.D. year, and sex of Ph.D. recipient. It should be noted that the sex variable was not always available even for survey respondents. Every effort was made to obtain this information for as many respondents as possible, but for a small percentage, this could not be done with confidence. Thus, you will notice that there are missing data for many of the tabulations involving gender in this year's report. Prior to 1997, whenever gender was missing, the data were assigned to "male." In 1997, it was decided to discontinue this practice. However, for consistency with previously published results from earlier reports, this procedure was used for years prior to 1997 in all trend tables. The tabulations involving gender for 1997 and 1998 exclude missing cases except where noted otherwise.

Wherever possible this report includes data from all Ph.D. records whether complete or skeletal; thus the reported total number of Ph.D. recipients for 1998 (42,683) includes both respondents and non-respondents. It

Wherever possible this report includes data from all Ph.D. records whether complete or skeletal; thus the reported total number of Ph.D. recipients for 1998 (42,683) includes both respondents and non-respondents. It should also be noted that, in keeping with the practice of earlier data collection cycles, counts for previous years were corrected by the addition of data from surveys received after the close of data collection for a given year. In this year's cycle, this will particularly affect the 1997 data and analysis because, in addition to the changes engendered by adding data from questionnaires for 1997 doctorate recipients that arrived after the 1997 closing date, 150 cases originally coded as 1997 doctorate recipients were determined actually to have received their doctorates in the 1998 academic year and were recoded accordingly. This has an effect not only on the overall count of doctorate recipients for 1997 but on the response rates and analyses of individual variables, most notably on the variable PHDFIELD which indexes field of doctorate. The reader will therefore note differences in the values reported for 1997 in the trend tables of this year's summary report compared to the 1997 Summary Report. For comparison, both the original and revised response rates for 1997 are included in the table of response rates shown below.

II. Item Response Rates

The table on the following pages shows the response rates for each item in the Survey of Earned Doctorates for 1988-1998. The numbers and percentages shown in the tables and figures in the body of the Summary Report are based only on the number of doctorate recipients who responded to the applicable survey items. For crosstabulations, the response rate for a given tabulation will be no greater than the lowest response rate for the items involved in the tabulation.

For additional technical information on the Survey of Earned Doctorates, please contact

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II. ITEM RESPONSE RATES, 1988-1998

Variable		Name	Field	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997 (Prelim)	1997 (Adjusted)	1998 (Prelim)
PHDFICE	Ph.D. FICE Code	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	NA	NA	NA	
RACE ^a	Race/Ethnic Group (Recoded)	90.6	90.2	93.9	95.3	95.6	96.2	97.1	96.6	95.8	92.5	92.9	93.3		
PHDENTRY	First Grad. Year in Ph.D. Instn.	NA	NA	NA	NA	NA	86.9	86.7	86.5	85.5	78.4	78.3	83.3		
SRCE1ED ^b	Primary Source of Support (Edited)	83.3	82.5	78.1	77.6	69.7	66.2	72.4	74.9	87.9	87.2	87.1	88.1		
PDWK1ED ^c	Primary Work Activity (Edited)	61.4	61.4	56.2	55.9	55.7	54.7	56.3	56.6	60.8	60.0	59.9	60.8		
		(92.6)	(92.4)	(83.8)	(83.8)	(83.5)	(83.3)	(86.1)	(86.8)	(93.3)	(94.4)	(92.8)	(93.0)		
PDWK2ED ^c	Secondary Work Activity (Edited)	38.9	39.2	39.5	39.5	37.4	36.7	38.2	38.4	48.5	51.4	51.3	52.0		
		(58.6)	(58.9)	(58.9)	(59.3)	(56.0)	(55.8)	(58.4)	(58.8)	(74.4)	(80.9)	(79.6)	(79.7)		
EDFATHER	Father's Education	88.8	88.3	90.8	92.3	93.1	92.7	92.7	92.3	91.4	88.8	88.7	89.4		
EDMOTHER	Mother's Education	88.2	87.5	90.5	92.2	93.0	92.6	92.5	92.1	91.6	89.1	89.0	89.6		
BIRTHYR	Year of Birth	95.8	92.4	96.6	98.2	97.7	97.3	98.2	97.5	96.8	92.5	92.8	93.5		
BIRTHPL	Place of Birth	92.5	91.8	92.1	94.1	95.1	94.9	94.8	94.5	93.0	89.9	89.8	90.5		
SEX	Sex	100.0	100.0	100.0	99.6	99.4	99.2	99.6	99.6	99.5	99.1	99.2	99.6		
MARITAL	Marital Status	91.6	91.0	91.7	91.5	92.0	91.6	91.5	91.0	91.6	88.6	88.5	89.9		
DEPENDS	Number of Dependents	85.8	85.8	90.0	89.5	89.8	89.8	89.7	89.4	89.4	87.6	87.5	88.4		
CITIZ	Citizenship	92.9	92.3	96.2	97.9	97.6	97.1	98.2	97.9	96.9	91.5	92.4	92.7		
CNTRYCIT ^c	Country of Citizenship	20.8	21.7	26.4	29.2	30.3	30.2	31.9	31.3	31.3	25.7	25.6	26.3		
		(89.3)	(90.1)	(97.2)	(98.0)	(98.5)	(98.6)	(99.3)	(99.4)	(98.5)	(96.5)	(95.3)	(99.0)		

NOTE: NA = not available.

^aThe percentage represents the race/ethnic groups standardly reported by the Doctorate Data Project; multiple and "other" races are excluded.

^b As of FY 1996, the percentage includes recipients who said they had no primary source of support.

^c The percentages on the first line are based on the total doctoral cohort for a fiscal year. The percentages on the second line (enclosed in parentheses) are based on the number of recipients who reported plans for postdoctoral employment.

Variable		Name	Field	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997 (Prelim)	1997 (Adjusted)	1998 (Prelim)
RACERAW ^a	Race/Ethnic Group			90.6	90.2	93.9	95.3	95.6	96.2	97.1	96.6	95.8	92.5	92.8	93.3
HANDICAP ^b	Handicap Indic. (incl. "No" from 1989-present)			1.7	91.0	92.4	93.4	93.9	93.6	93.7	93.3	91.7	89.4	89.3	97.9
HSPLACE	Place of High School			90.6	89.8	90.8	93.5	94.5	94.0	93.9	93.5	92.1	89.5	89.4	90.5
HSYEAR	Year of H.S. Graduation			89.2	88.5	90.5	90.9	92.1	92.1	91.7	91.6	90.4	88.3	88.3	93.8
JRCOLL	Jr. Coll. Indic. (incl. "No")			90.2	89.1	90.8	92.0	92.7	92.9	92.5	92.3	90.5	90.8	90.7	99.9
REGNURSE ^c	Registered Nurse			0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
CEPLACE	Place of College Entrance			90.5	90.3	90.8	91.8	92.7	92.8	92.3	92.1	90.5	81.9	81.8	90.1
CEYEAR	Year of College Entrance			89.7	89.3	90.1	91.3	92.2	91.7	91.5	91.2	89.0	82.0	81.9	88.4
BAINST	Baccalaureate Institution			96.1	94.4	95.7	96.5	96.4	96.3	96.6	95.8	94.9	88.6	89.0	90.4
BAFIELD	Field of Baccalaureate			90.6	90.3	91.0	92.3	92.4	91.9	91.6	90.9	89.2	82.1	82.0	83.9
BAYEAR	Year of Baccalaureate			95.4	93.2	95.0	95.5	96.0	95.7	96.2	95.5	94.7	87.7	88.1	89.9
BANONE ^d	No Baccalaureate/Master's			0.7	0.6	1.1	1.1	0.9	8.6 ^d	9.1 ^d	9.7 ^d	11.4 ^d	6.9 ^d	6.9 ^d	8.1 ^d
GEYEAR	Year of Graduate Entrance			88.5	88.2	86.6	89.4	89.5	88.6	88.2	87.4	85.7	76.7	76.6	81.1
MAINST	Master's Institution			78.3	77.5	78.2	78.4	79.0	78.6	78.9	78.0	77.2	72.0	71.9	72.8
MAFIELD	Field of Master's			75.3	74.6	75.5	76.3	77.0	76.1	76.1	75.3	74.5	68.3	68.2	70.1
MAYEAR	Year of Master's			76.7	75.9	76.7	77.1	77.7	77.0	77.1	76.3	75.5	70.7	70.6	72.5

NOTE: NA = not available.

^a The percentage represents the race/ethnic groups standardly reported by the Doctorate Data Project; multiple and "other" races are excluded.

^b The percentages from 1985-1988 represent the numbers of Ph.D.s with handicaps. Beginning in 1989, the response rates include Ph.D.s who reported "no" handicap. Note: The definition of "handicapped" was much more restrictive in 1990 and 1991.

^c Because this field is not applicable to all doctorate recipients, the response rate will always be under 100%.

^d Because this field is not applicable to all doctorate recipients, the response rate will always be under 100%. Note: "No Baccalaureate/Master's" represents only "no baccalaureate" from 1983 to 1992. Beginning in 1993, it indicates that the Ph.D. held no baccalaureate and/or master's degree.

Variable		1988	1989	1990	1991	1992	1993	1994	1995	1996	1997 (Prelim)	1997 (Adjusted)	1998 (Prelim)
Name	Field												
PROFDEG ^a	Type Professional Doctorate	1.1	1.3	1.3	1.6	1.6	1.6	1.7	1.8	1.9	1.9	1.9	1.2
PROFYEAR ^a	Year Professional Doctorate	1.1	1.3	1.3	1.6	1.5	1.6	1.7	1.8	1.9	1.7	1.8	2.8
PHDINST	Doctorate Institution	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
PHDFIELD	Field of Doctorate	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	98.5	100.0	100.0
PHDCY	Calendar Year of Doctorate	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
PHDMONTH	Month of Doctorate	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
PHDFY	Fiscal Year of Doctorate	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
PHDTYPE1	Type of Doctorate	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	95.0	100.0	100.0
PHDTYPE2 ^a	Applied Research Doctorate	3.1	2.8	2.6	2.3	2.4	2.4	2.7	2.5	2.2	0.9	0.9	1.0
TOCEBA ^a	Time Out CE-BA	88.3	88.0	88.5	89.7	90.5	89.7	89.7	88.9	86.7	82.1	82.0	82.6
TOBAGE ^a	Time Out BA-GE	88.6	88.3	86.6	89.5	89.6	88.6	88.2	87.4	85.7	76.7	76.6	81.1
TOGEMA ^a	Time Out GE-MA	72.4	71.7	72.2	73.3	74.0	73.1	73.1	72.0	70.4	61.3	61.2	63.6
TOMAPHD ^a	Time Out MA-Ph.D.	71.4	70.1	65.2	69.9	71.1	69.9	70.0	69.0	68.1	67.5	67.5	65.1
TOGEPHD	Time Out GE-Ph.D.	85.7	84.7	77.4	84.0	84.5	83.1	82.5	81.8	80.2	75.9	75.8	74.9
TICEPHD	Time In CE-Ph.D.	85.2	84.1	76.7	83.4	84.3	83.0	82.9	82.4	80.8	75.1	75.0	78.0
YEARSFT	Full-time enrollment	71.2	69.3	83.1	73.9	75.7	75.7	75.2	74.5	77.1	82.1	82.0	89.4
YEARSPT	Part-time enrollment	71.2	69.3	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
YEARSOUT	Not enrolled	71.2	69.3	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PHDDISS ^b	Field of Dissertation	91.0	89.8	NA	NA	65.0 ^b	92.7	93.3	92.4	92.0	88.5	88.4	89.8
SRCEPRIM ^c	Primary Source of Support	72.3	71.7	75.8	77.7	69.7	66.1	72.4	74.9	87.9 ^c	87.2	87.1	88.2
DEBTIND	Debt Indicator (incl. "No")	90.8	90.9	92.2	93.1	93.3	92.8	92.8	92.4	91.1	NA	NA	NA
PRESTAT	Predoctoral Status	91.2	90.7	92.4	93.5	93.5	93.1	92.9	92.5	91.7	87.6	87.5	89.7
PDOCSTAT	Postdoctoral Status	90.2	89.6	90.7	91.6	92.1	91.8	91.7	91.0	90.9	88.3	88.2	89.3
PDOCPLAN	Postdoctoral Plans	89.8	89.4	91.3	92.1	92.5	92.4	92.4	91.8	91.2	86.5	86.4	87.6

NOTE: NA = not available

^aBecause this field is not applicable to all doctorate recipients, the response rate will always be under 100%.

^bThe percentage was low in 1992 because 28% of the Ph.D.s completed earlier survey forms that did not request field of dissertation.

^cAs of FY 1996, the percentage included recipients who said they had no primary source of support.

Variable		1988	1989	1990	1991	1992	1993	1994	1995	1996	1997 (Prelim)	1997 (Adjusted)	1998 (Prelim)
Name	Field												
PDREASON	Reason for Postdoctoral Appointment	NA	NA	NA									
PDSTDFLD ^a	Postdoctoral Study Field	22.6 (95.0)	21.9 (94.7)	23.2 (95.2)	24.4 (95.1)	24.3 (93.4)	25.1 (94.0)	25.3 (93.8)	25.0 (93.9)	25.4 (97.4)	25.4 (99.0)	25.4 (99.0)	25.4 (96.0)
PDSTDSUP ^a	Sources of Study Support	22.3 (93.8)	21.6 (93.6)	22.4 (91.8)	24.0 (93.4)	24.2 (92.9)	24.7 (92.4)	25.1 (93.1)	24.6 (92.5)	24.7 (94.9)	24.8 (99.9)	24.5 (100.0)	25.2 (95.8)
PDEMPLOY ^b	Type of Employer	63.5 (95.7)	63.9 (96.1)	63.6 (94.9)	63.3 (94.9)	62.9 (94.3)	61.4 (93.5)	61.1 (93.5)	60.9 (93.4)	61.4 (94.2)	59.8 (94.1)	59.7 (92.7)	61.7 (94.4)
PDWKPRIM ^b	Primary Work Activity	61.4 (92.6)	61.4 (92.4)	56.2 (83.8)	55.9 (83.8)	55.7 (83.5)	54.7 (83.3)	56.3 (86.1)	56.6 (86.8)	60.8 (93.3)	60.1 (94.5)	60.0 (93.0)	61.0 (93.2)
PDWKSEC ^b	Secondary Work Activity	38.9 (58.6)	39.2 (58.9)	39.5 (58.9)	39.6 (59.3)	37.4 (56.0)	36.7 (55.9)	38.2 (58.4)	38.4 (58.8)	48.5 (74.4)	49.4 (77.7)	49.3 (76.4)	51.1 (76.7)
PDEMPFLD ^b	Field of Employment	48.2 (72.7)	47.9 (72.1)	47.0 (70.2)	47.3 (70.8)	45.3 (68.0)	44.0 (67.0)	45.4 (69.4)	45.7 (70.1)	58.3 (89.6)	59.1 (93.0)	59.0 (91.5)	60.0 (91.9)
PDCONSID	Postdoctoral Appointment Consideration	NA	NA	NA									
PDDECISN	Decision Against Postdoc	NA	NA	NA									
PDUSFOR	Postdoctoral Location US or Foreign	NA	90.8	90.7	90.1								
PDAFFIL	Postdoctoral Affiliation	68.6	68.3	80.0	89.6	94.4	93.8	94.6	94.1	92.6	NA	NA	NA

NOTE: NA = not available

^aThe percentages on the first line are based on the total doctoral cohort for a fiscal year. The percentages on the second line (enclosed in parentheses) are based on the number of recipients who reported plans for postdoctoral study.

^bThe percentages on the first line are based on the total doctoral cohort for a fiscal year. The percentages on the second line (enclosed in parentheses) are based on the number of recipients who reported plans for postdoctoral employment.

III. Derived Variables

The following derived variables deserve further explanation.

Postdoctoral Plans to Stay in the United States

Starting in 1997, the planned postdoctoral location of doctorate recipients was coded in a new variable called PDLOC using FIPS codes for U.S. states and territories and countries. Values of PDLOC less than 100 indicate a postdoctoral location in the United States.

Also beginning in 1997, a dichotomous variable, PDUSFOR, was created to index whether the planned postdoctoral location reported by the respondent was in the United States or in a foreign location.

For years prior to 1997, this variable is based on PDAFFIL. The first character of PDAFFIL flags whether the respondent's planned postdoctoral location is in the United States; a numeric character in this position indicates a United States location. Non-numeric values in the first position of PDAFFIL (except "R") indicate non-U.S. locations. A value of "R" for PDAFFIL signifies the respondent's refusal to provide information.

For the interested user, the following SAS code produces "USPLAN" as an index of plans to stay in the United States following the doctorate using PDAFFIL1 (a variable created using the first character of PDAFFIL).

```
usplan=2; /* Outside the U.S. */
if pdaffil1 in ("0","1","2","3","4","5","6","7","8","9") then usplan=1; /* U.S. */
if pdaffil1 eq "R" then usplan=.;
if pdaffil1 eq " " then usplan=.;
```

Firm Postdoctoral Plans

Postdoctoral Plans are coded using the values of PDOCTSTAT which indicate that the doctorate recipients postdoctoral plans were definite at the time the survey was completed. That is, codes 0, 1, or A on PDOCTSTAT indicate that the respondent had definite postdoctoral plans, whereas codes 2, 3, and 4 indicate that the respondent was still seeking to determine postdoctoral placement.

The following is the SAS code used to derive FIRMPLAN from PDOCTSTAT :

```
if pdocstat in ("0","1","A") then firmplan=1; /* Definite */
if pdocstat in ("2","3","4") firmplan=2; /* Seeking */
if pdocstat eq " " then firmplan=.;
```

Firm Plans to Stay in the United States

This variable is derived from USPLAN and FIRMPLAN. A respondent was coded as having firm plans to stay in the United States if the reported postdoctoral location was in the United States and the reported postdoctoral plans were coded "definite."

The following is the SAS code that creates the variable FIRMUS from USPLAN and FIRMPLAN as described above.

```
firmus=2;  
if (usplan eq 1 and firmplan eq 1) then firmus=1;  
if usplan eq . or firmplan eq . then firmus=.;
```

Race/Ethnicity

Adjustments to numbers: Readers should keep in mind that fluctuations in numbers for a racial/ethnic group reflect to some degree any upward or downward change in both overall survey response and response to the racial/ethnic item. Since 1990 response to race/ethnicity has shown great improvement -- a result of new procedures for following up missing information. Race/ethnicity was not followed up prior to 1990.

All follow-up responses received before survey closure are included in the data presented in the *Summary Report* for that survey. Responses arriving after closure are included in the next year's report. The extension of survey closure dates in the past four years has allowed most follow-up responses to be received in time to be included in the *Summary Reports* for those surveys. Postsurvey adjustments were greatest for 1990 and 1991 data, much less for 1992, and minimal for 1993. In 1994 response to the racial/ethnic item reached 97 percent by survey closure -- the highest rate ever. Any postsurvey adjustments for 1998 data will be included in next year's report, but they are expected to be very slight because of the extended closure. Updated numbers for all recent years appear in Appendix Table B-2 in this report.

History of the racial/ethnic question: Although this item was first introduced to the Survey of Earned Doctorates in 1973, over 25 percent of recipients in 1973 and about 13 percent in 1974 either completed earlier questionnaires or provided unusable responses. Since 1975 the racial/ethnic data have been more reliable, with response rates ranging from 90.1 to 97.1 percent (the latter in 1994). The information on race/ethnicity presented in this report is limited to the period 1977 to 1998.

The racial/ethnic question has undergone several revisions over the years. In 1977 it was modified to correspond to a standard question format recommended by the Federal Interagency Committee on Education and adopted by the Office of Management and Budget (OMB) for use in federally sponsored surveys; and explanation of the effect of these changes is detailed on page 13 of *Summary Report 1977*. (Note: Changes in the OMB guidelines prompted the reclassification of persons having origins in the Indian subcontinent from the white category to the Asian category.) In 1980 the question was further revised in two ways: (1) the Hispanic category was subdivided into Puerto Rican, Mexican American, and other Hispanic, and (2) respondents were

asked to check only one racial category. (Before 1980 doctorate recipients could check more than one category to indicate their race.) The item was modified again in 1982 to separate the questions on race and ethnicity. Since then, respondents have been asked to first check one of the four racial group categories (American Indian, Asian, black, or white) and then indicate whether or not they are Hispanic. *In this report, Doctorate Recipients who reported Hispanic heritage are classified as Hispanic regardless of their racial designations;* the remaining Doctorate Recipients are then counted in the respective racial groups. (Note: Doctorate recipients who checked the category “American Indian or Alaskan Native” are identified as “American Indian” in this report.)

Time to Doctorate

Total time to degree (TTD): TTD measures the total elapsed time between the baccalaureate and the doctorate (including time not enrolled in school.) TTD can be computed only for individuals whose baccalaureate year is known. Baccalaureate year is often obtained from commencement programs or doctorate institutions when not reported by the recipient.

Months are now included in the computation (see note below).

Registered time to degree (RTD): RTD gauges the time in attendance at colleges and universities between receipt of the baccalaureate and the doctorate. Enrollment may include years of attendance not related to a recipient’s doctoral program. RTD can only be computed for individuals who provided all years of college attendance after the baccalaureate.

Months are now included in the computation (see note below).

Note about medians: The method of computing medians has been revised. Beginning with Summary Report 1994, **months** (of birth, baccalaureate, and doctorate) are included in the calculations whenever available; if months are missing, only years are used in the calculations. (However, medians are not computed for years prior to 1969 because doctorate month is unavailable for all Doctorate Recipients.) Medians presented in previous Summary Reports were based only on years. Some medians would be the same regardless of the method of computation, but the new method generally computes slightly different results. While differences are small (usually one- or two-tenths of a year), readers should consider these differences when comparing medians presented in the report with those in earlier reports.

IV. Changes to the 1998 SED

MARITAL

Beginning in the 1998 SED, response categories for the questionnaire item on marital status have been expanded from three to five choices. The table below illustrates this change.

Old version (SED 1997 and earlier)		New version (SED 1998 and later)	
Code	Questionnaire selection	Code	Questionnaire selection
0	Single, never married	1	Married
1	Married	2	Living in a marriage-like relationship
2	Separated, divorced, widowed	3	Widowed
		4	Separated/divorced
		5	Never married

Questionnaire selections “Single, never married” and “Married” map directly from the old version to the new version. These two choices present no problems of comparability across years. However, one category from the previous questionnaire forms, “2-Separated, divorced, widowed”, has been separated into two categories in the new version, “3-Widowed” and “4-Separated/divorced.”

SOURCE of FUNDING variables (Questions A11, A12)

Before the 1998 SED, the source of funding variables, SRCE(A-M), SRCEPRIM and SRCESEC, took 35 possible numeric values, indicating specific funding sources that supported the respondent’s graduate education. A number of these numeric codes keyed to specific federal programs (e.g. Patricia Roberts Harris scholarships, NIH traineeships etc.). The new code frame reduces the respondent’s available choices to 13, and presents options as broad categories of funding sources (e.g. “federal government”), rather than specific programs (e.g. “NIH traineeship).

The number of closed-ended answer choices offered at Question A11 corresponds with the total number of sources of financial support variables recorded on the DRF. To make the analysis of these data easier, SRCE(A-M) were converted to Yes/No/Don’t Know questions, replacing numerical coding of specific college funding programs. Data users can perform straightforward frequencies on each source of funding variable, rather than running frequencies on 13 variables and summing the results to get the number of cases receiving funding from each of 35 sources.

To preserve consistency in coding over the two form types for 1998 SED, the coding system shown in the table below should be used to map the older codeframe into the new code frame.

Old version (SED 1997 and earlier)		New version (SED 1998 and later)	
Code	Questionnaire selection	Code	Questionnaire selection
80	Guaranteed Student Loan (Stafford Loan)	a.	Loans (from any source)
81	Perkins Loan (formerly NDSL)		
89	Other loan - specify		
91	Foreign (non-U.S.) Government	b.	Foreign (non-U.S.) support
12	University fellowship	c.	Fellowship, scholarship
29	Other HHS		
33	NSF Fellowship		
40	Patricia Roberts-Harris Fellowship		
44	Title VI Foreign Language		
49	Other Dept. of Education		
53	USDA Fellowship		
55	NEH		
60	Veterans Administration		
61	Fulbright Fellowship		
69	Other/Specify (Other Federal Sup.)		
70	Ford Foundation		
71	Rockefeller Foundation		
73	Mellon Foundation		
78	Other Fellowship		
		d.	Dissertation grant

Old version (SED 1997 and earlier)		New version (SED 1998 and later)	
Code	Questionnaire selection	Code	Questionnaire selection
10	Teaching Assistantship	e.	Teaching assistantship
11	Research Assistantship	f.	Research assistantship
22	NIH		
32	NSF		
52	USDA		
62	Other Federal Research Assistantship		
21	NIH Traineeship/Fellowship	g.	Traineeship
		h.	Internship or residency
		i.	Personal savings
14	College Work Study	j.	Other personal earnings during graduate school
01	Own/Family Resources		
19	Other/Specify (University-Related)		
02	Spouse's Earnings	k.	Spouse's, significant other's, or family earnings or savings
03	Family Contributions		
90	Business/Employer	l.	Employer reimbursement/assistant
92	State Government	m.	Other specify
99	Other Specify		

In addition, the tabulations in this report further collapse the 13 new categories into 7 as follows.

1998 Summary Report Table Category	Raw Variables
1. Teaching Assistantships	SRCE-E
2. Research Assistantships/Traineeships/Internships	SRCE-F,G,H
3. Fellowships/Dissertation Grants	SRCE-C,D
4. Own Resources (loans + spouse + savings + work)	SRCE-A,I,J,K
5. Foreign Govt.	SRCE-B
6. Employer	SRCE-L
7. Other	SRCE-M

Because the new source of support variable code frame groups these sources somewhat differently than in the past, users should approach generalizations on trends in financing doctoral education with caution. For example, the table below breaks down the categories further. It pinpoints the source of the decline in the “Own Resources” category: the double-digit drop in the “Other personal earnings in graduate school” category. At the same time, it shows that the increase in doctorate recipients indicating they received fellowships accounts for almost all of the increased proportion of doctorate recipients in the category “Fellowships/Dissertation Grants.” While the earlier years’ data suggests a slight increase in the proportion of doctorate recipients indicating “Fellowships/Dissertation Grants” as their primary source of support, the one-year increase of more than 5 percent from 1994-1997 to 1998 raises questions. Again, data from another National Science Foundation survey, *The Survey of Graduate Students and Postdoctorates in Science and Engineering*, suggests that proportion of graduate students relying on fellowship aid has remained relatively flat since the early 1980s.

Distribution of Responses to Source of Support Variable, 1990-1998 (SRCEPRIM used in these calculations)

Source of Support	1990-1993		1994-1997		1998	
	No.	Pct.	No.	Pct.	No.	Pct.
Loans (from any source)	2912	2.6	4150	3.1	2324	6.2
Foreign (non-U.S.) support	3020	2.7	3180	2.4	952	2.5
Fellowship, scholarship	9606	8.7	13905	10.3	5953	15.8
Dissertation grant	--	--	--	--	183	0.5
Teaching assistantship	19492	17.7	23694	17.5	6707	17.8
Research assistantship	28539	26.0	36701	27.1	9369	24.9
Traineeship	2487	2.3	2524	1.9	562	1.5
Internship or residency	--	--	--	--	55	0.1
Personal savings	--	--	--	--	1241	3.3
Other personal earnings during graduate school	28084	25.6	30618	22.6	4678	12.4
Spouse's, significant other's, or family earnings or savings	12786	11.6	14912	11.0	3905	10.4
Employer reimbursement/assistance	2072	1.9	2995	2.2	1184	3.1
Other	912	0.8	2624	1.9	586	1.6

Source: NSF/NIH/NEH/USED/USDA, Survey of Earned Doctorates